Deputy Under Secretary of Defense (Logistics)

21st Century Logistics

Logistics Transformation

Update, Focus, and Accelerate

FOREWORD

"Logistics Transformation—Update, Focus, and Accelerate" has been compiled to introduce the new administration to a critically important—but often overlooked—necessity to warfighter success. The importance of logistics was put to me best early in my tour when I was told *"an Army fights with its weapons but lives off its logistics."* Our warfighters must have confidence that their logistics processes and every link in their supporting supply chains can provide either expected service or exception-based, real-time information to support alternative operational decisions.

During the last 30 months, I have been honored to serve in the Department of Defense as the senior civilian logistician, a member of the Office of the Secretary of Defense (OSD) Acquisition, Technology, and Logistics (AT&L) organization. Without previous military experience, my role has been to bring to DoD lessons learned from my private-sector logistics experience. Two dedicated groups of defense logistics leaders have contributed extensively both to my education and to this report.

First, my DUSD (L&MR) organization has been extremely supportive in both my indoctrination to DoD logistics and in championing my efforts to accelerate logistics transformation. I appreciate their support and dedication in laying a foundation for the future while addressing a myriad of other daily challenges. Second, the Logistics Reform Senior Steering Group from Component commands and the Joint Chiefs of Staff (J4) has made possible the progress recorded in this report.

Our national military strategy depends on this logistics community to define our future logistics environment, improve logistics processes and information technology, and strengthen warfighter confidence. The next administration faces the challenge to focus the hundreds of ongoing initiatives, find the forcing function, and adopt a leadership model that will accelerate logistics transformation.

Logistics Transformation is a unique, bipartisan opportunity to provide our military members with support equal to or better than that which they have grown to expect in their personal lives. During the next 4 years, we can empower warfighters to be confident customers if we involve the best minds from defense, both military and civilian, and representatives from the private sector. I stand ready, as many others do, to continue to contribute to accelerating this important effort.

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Deputy Under Secretary of Defense for Logistics & Materiel Readiness

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Executive Summary

As our warfighters migrate from the "mass model" of operations, our logistics system must continue to migrate to a lean, agile delivery system focused on meeting new warfighter needs—but at even lower costs. This migration is ***logistics transformation***.

This paper provides an update of logistics today, where we are headed and where we need to focus, and a perspective on how to accelerate logistics transformation. As we transform logistics, the future challenges of logistics leaders will be very different. Justification for increased attention varies, but universally includes three fundamental themes: changing military missions, aging weapon systems support requirements, and the economics of maintaining readiness while retooling our capabilities.

Working together, DoD's senior logistics leaders have formed a community called the Logistics Reform Senior Steering Group (LRSSG) to coordinate improvement efforts and to achieve the objectives of Focused Logistics. In FY2000, the DoD Logistics Strategic Plan was developed by the LRSSG to focus the collective attention and resources necessary for achieving the key objectives required to improve logistics support to the warfighter. The Logistics Strategic Plan promulgates six basic objectives: optimize support to the warfighter; improve strategic mobility; implement modern, relevant performance metrics; achieve total asset visibility; reengineer logistics processes and systems; and minimize logistics costs.

The target of the Logistics Strategic Plan is a high level of logistics excellence that engenders full warfighter confidence in the logistics process by providing the right product, delivered to the right place, in the right condition and packaging, in the right quantity, at the right cost, to the right customer, and at the right time—ALL THE TIME.

Each logistics component has initiated implementation actions based on high-level DoD guidance, assessments of joint warfighting logistics support needs, and component-specific logistics support challenges. This report contains descriptions of more than 30 specific programs and references to more than 50 published reports. In addition, there are hundreds of completed and continuing Military Service and Defense Agency initiatives that are leading to the achievement of the transformation objectives. GAO has criticized our efforts, saying we need to focus on developing a comprehensive strategy or plan that guides the specific efforts. GAO further states that no detailed framework exists to increase the likelihood that the initiatives are coordinated and do not conflict or duplicate efforts. We agree with GAO.

DoD needs to prioritize and focus current investments and build a fully integrated, comprehensive, coordinated logistics process for the future. This will require formulation and dissemination of broad-based implementation principles through a Logistics Architecture to guide and tie together the individual component initiatives. While this logistics architecture is the cornerstone of transformed logistics, achievement of the planned vision is predicated on resolving issues outside the logistics community. These challenges include consolidating the infrastructure through base realignment and closure (BRAC); obtaining secured communications; reforming the planning, programming, and budgeting system (PPBS); and integrating acquisition and logistics reform.

Four critical actions necessary for acceleration of logistics transformation to develop specific principles are outlined below, along with a recommendation on how future logistics leaders should proceed:

Measure impact on warfighter confidence. Accelerate efforts to implement customer wait time (CWT)/time definite delivery (TDD) measurement concepts. In parallel, review all continuing and new logistics-related initiatives to ensure that output metrics are focused on warfighter confidence.

Define future logistics environment. Accelerate service leader and civilian awareness of the initial models developed in Phase One, and complete detailed design, Phase Two, sooner than the projected 2002 target date.

Improve information technology application. Accelerate visibility of current logistics IT foundation initiative to both senior OSD, CIO community and Component logistics and IT leaders by focusing on potential increased sharing of joint IT initiatives such as with the eight independent ERP projects underway.

Senior-leadership-supported forcing function. The new DUSD (L&MR) should engage senior DoD leadership in the review of all options for accelerating logistics transformation and elevating the reporting relationship in OSD and the Components.

In summary, DoD's logistics leadership model needs review. Dedicated military and civilian logistics leaders need change in the environment if their efforts are to result in desired outputs. Options such as improving leadership continuity, exchanging logistics officers between services, and extending duty tours, all deserve independent review if DoD is to successfully accelerate logistics transformation.

Section 1
Introduction

The world has changed significantly over the past decade. Before 1990, our military forces deployed once every 4 years; during the 1990s, they deployed every 14 weeks. Because the nature of threats and military operations are changing, a "mobility-and-precision" model is replacing the "mass" model of warfare.

Over the past decade, as we restructured our logistics capabilities to meet two Major Theater Wars (MTWs), logistics leaders have focused on reducing cost and infrastructure.[1] To continue to protect our vital national interests, the Joint Staff and military departments now focus on operational concepts built on combat agility, information dominance, surgical precision, and focused logistics. These operational concepts (Joint Staff's Joint Vision 2020[2] and the Military Departments' initiatives, including the Army's Vision, the Navy's Forward From the Sea, the Marine Corps's Operational Maneuver From the Sea, and the Air Force's Expeditionary Aerospace Force) embed implicit operational logistics requirements.

The need for speed, agility, dependability, and precision demand even further improvements in our logistics operations. As our warfighters migrate from the "mass model" of operations, our logistics system must continue to migrate to a lean, agile delivery system focused on meeting new warfighter needs—but at even lower costs. This migration is ***Logistics Transformation***.

We can declare victory over the logistics challenges we faced during the past decade. Looking forward, we must ensure that we adequately focus logistics transformation to provide complete support. We will provide that support with new supply chain management concepts, new technologies, and new supporting information systems—including embedded information technology. Focused Logistics[3] is a critical element of JV2020, our nation's military concept for achieving Full Spectrum Dominance that is persuasive in peace, decisive in war, and preeminent in any form of conflict.

As we transform logistics, the challenges and focus of logistics leaders will be very different. Justification for increased attention to focused logistics varies, depending on an individual's perspective, but universally includes three fundamental themes: changing military missions, aging weapons systems support requirements, and economics of maintaining readiness while retooling our capabilities.[4]

First, our military missions, objectives, and frequencies continue to change dramatically. From 1990 to 1999, U.S. forces deployed 29 times for contingency operations, peacekeeping operations, and humanitarian relief. The underlying military structure that supports our nation's current Two Major Theater War strategy is undergoing major overhaul to meet this growing number of contingency operations. This overhaul likely will increase early in the 21st century. As noted by the Secretary of Defense in recent congressional testimony, the va-

riety of potential military operations has increased dramatically, while the time dimension for response has decreased dramatically. The combination of increased variation in requirements and decreased time to respond underlies the importance of achieving Focused Logistics objectives. These objectives include the fusion of logistics information and transportation technologies for rapid crisis response, deployment, and sustainment; the ability to track and shift units, equipment, and supplies even while en route; and the ability to deliver tailored logistics packages and sustainment directly to the warfighter.

Second, aging, complex weapons systems, an aging work force, and supporting business processes present challenges. The military logistics framework required to support multi-contingency, rapid deployment conditions must be adapted to the current environment, which includes aging weapons systems and complex, unintegrated business processes that were built on increasingly obsolete information technology support. The logistics work force also is aging, and will need to be replaced. Aging weapons systems, which will be used well into the current century, will become increasingly challenging to maintain and support in complex peacekeeping, humanitarian, and regional confrontations often involving our allied partners.

Third, national priorities require difficult economic trade-offs. These trade-offs include modernizing existing weapon systems and acquiring expensive new systems while simultaneously investing in "quality of life" improvements, which will support tough decisions about retention and recruiting forces. The Department's annual logistics expenses exceed $80 billion and involve more than 700,000 DoD active duty military, reserve, and civilian logisticians, plus about 2,100 contractors. (Table 1.1 shows an overview of DoD logistics operations.) Expenses of this magnitude provide great potential for improvement of cost and asset reduction. Further, logistics long has been considered a "bill-payer," and money allocated for logistics often is redistributed to pay other bills.

While these themes provide a context for change, the underlying challenge is to transform logistics to create and maintain warfighter confidence in logistics support at an affordable cost. The challenge for the DoD logistics community is to provide the best possible materiel and services support to the operational warfighter within the bounds of available personnel and financial resources. Defense logistics must transform itself to attain greater efficiencies, borrowing best practices from successful organizations and applying them to DoD.

Achieving logistics transformation requires a regeneration of passion on the part of both suppliers and customers, both within and outside of DoD, to work together to make the needed changes. In fact, we already have made significant progress in the improvement of our legacy logistics processes and systems. Much more remains to be done to meet future logistics operational requirements that will require response in hours and days, not months and weeks. DoD can learn much from public- and private-sector business practices that have achieved dramatic results. Finally, to transform logistics will require highly committed, knowledgeable leadership, effective teamwork, and motivated personnel. The initial steps have been taken. The challenge to complete the transformation remains the responsibility of the entire Department of Defense.[5]

The remainder of this report is organized as follows:

- Section 2 contains an **Update** on logistics today. For the Office of the Secretary of Defense, the Joint Staff, the Military Services, and Defense Agencies, this section provides a summary of logistics accomplishments and transformation initiatives.

- Section 3 contains the future **Focus** for logistics in the logistics vision and end-state characteristics necessary to deliver the right maintenance capability and services, as well as the right material to the right place, at the right time, in the right quantity, and at the right cost—ALL THE TIME. In addition, this section discusses the progress made in developing a 2020 logistics architecture.

- Section 4 contains a perspective on how to **Accelerate** logistics transformation and identifies some of the tough issues that need addressing. In the section we discuss areas critical to accelerating logistics transformation, including creating and maintaining warfighter confidence, building the logistics architecture, accelerating process improvement and information technology, and finding a forcing function. We conclude by recommending that the new administration initiate an evaluation of the DoD logistics leadership model.

- Appendix A contains a list of key logistics community personnel. Appendix B provides additional information on DUSD (L&MR) and component initiatives. Appendix C provides a comprehensive list of current initiatives reported to Congress and OSD. Appendix D provides a list of acronyms.

The logistics community has united in purpose to establish a vision that will promote a fully integrated supply chain to ensure that products and services efficiently meet the needs of a joint warfighting force. Leadership provided by senior Department logisticians deserves special recognition. Joint Staff, Director of Logistics (J4); the senior Service logisticians; the Deputy Commander, United States Transportation Command; and the Director, Defense Logistics Agency, have “made it happen” within the environment described in the following sections.

In each section, we highlight a few specific initiatives within each of DoD’s major logistics organizations. These initiatives and current status can be identified quickly by highlighted text boxes and by referring to the endnotes. Table 1-1 provides an overview of the scope for selected aspects of DoD logistics. Additional logistics data are available in DoD Supply and Maintenance Fact Books and in TRANSCOM’s Annual Report.

Table 1-1. Overview of DoD Logistics

	Total manpower[a]		Appropriated annual logistics funding ($B)[a]	Inventory control points	National stock numbers managed[b]		Inventory value ($B)[c]	Requisitions processed per year[d]	Depots	Depot maintenance manhours[e]
	Military/civilian (including reserves)				Consumable/ reparable					
Army	421,263	79,879	24.60	3	55,172	78,609	9.41	864,529	Maintenance 5	10.1 M
Navy	205,618	77,688	26.30	1	137,984	191,208	17.61	795,587	Maintenance 8[f]	39.1 M
Marine Corps	88,311	8,303	5.11	1	31	4,084	0.36	17,409	Maintenance 2	2.0 M
Air Force	270,324	79,707	25.21	3	71,810	242,412	27.11	572,074	Maintenance 3	22.1 M
Defense Agencies	565	31,572	2.33	4	3,959,434	1,902	9.53	16,111,615	Distribution 24[g]	
Totals	986,081	277,149	83.55[h]	12	4,224,431	518,215	64.02	18,361,214	42	73.3 M

[a] Log resource baseline for FY2001. The Log resource baseline is an OSD-computed number based on official PPBS documents.

[b] Defense Logistics Information Service, 4th Quarter FY1999.

[c] Supply System Inventory Report, FY1999.

[d] Logistics metrics analysis reporting system, FY1999.

[e] Depot maintenance business profile, FY2000–2005.

[f] Four shipyards, three aviation maintenance depots, and one Naval Warfare Center.

[g] Major distribution depots: San Joaquin and Susquehanna.

[h] Total appropriated annual logistics funding in FY2000 is $78.0 billion in FY1997 dollars.

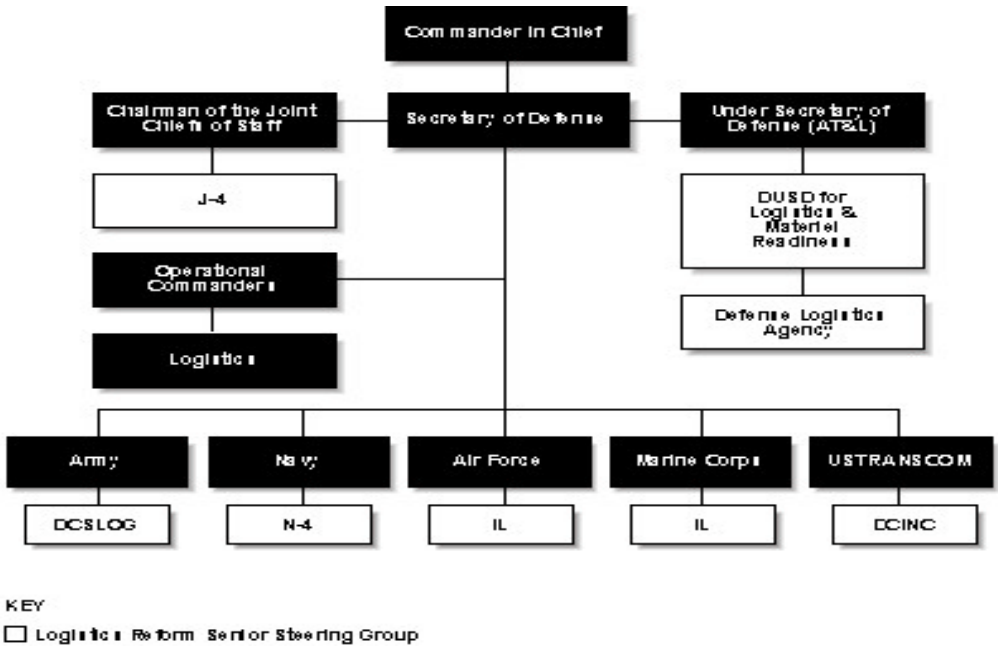
Section 2
Logistics Today—Update

The mission of DoD logistics is "to provide responsive and cost-effective support to ensure readiness and sustainability of the total force across the full spectrum of military operations." The breadth of DoD logistics and examples of specific accomplishments and ongoing initiatives follow.

Department of Defense logistics programs and operations consumed about $84 billion in FY2000 ($78 billion in constant FY1997 dollars), which accounts for about one-third of the Department's budget. Such expenditures rival the operations of the 10 largest corporations worldwide. Nearly half of DoD jobs are in the field of logistics. DoD employs more than 925,000 full-time logistics personnel (575,000 military and 350,000 civilians), while another 350,000 military reserve personnel provide logistics support.

Working together, DoD's senior logistics leaders have formed a community called the Logistics Reform Senior Steering Group (LRSSG) to coordinate our improvement efforts and to achieve the objectives of Focused Logistics. Appendix A lists key members of the logistics community. Figure 2-1 illustrates the DoD organization with LRSSG positions indicated by light boxes. The Deputy Under Secretary of Defense (Logistics and Materiel Readiness) is the chair.

Figure 2-1. Logistics Reform Senior Steering Group Members within DoD



Performance measurement is critical to managing defense logistics. From an enterprise view, DoD has reduced total logistics costs and exceeded the three logistics goals reported in Government Performance and Results Act. Since 1997, DoD has

- reduced total logistics costs from $84 billion to $78 billion (in constant FY1997 dollars);
- reduced average wholesale logistics response time (requisition to materiel receipt) from 32 days to 12 days;
- reduced secondary item inventory from $68.5 billion to $64 billion; and
- increased in-storage asset visibility from 60 percent to 94 percent.

Hundreds of completed and continuing Military Service and Defense Agency initiatives led to the achievement of these improvements. Appendix B provides additional information on the highlighted DUSD (L&MR) and component initiatives that follow. Appendix C provides a comprehensive list of current initiatives that have been reported to Congress and OSD.

LOGISTICS AND MATERIEL READINESS

- Logistics Strategic Plan
- Product Support
- Logistics Transformation

The Deputy Under Secretary of Defense (Logistics & Materiel Readiness) was elevated to a Senate-confirmed position in the FY2000 National Defense Authorization Act. DUSD (L&MR) serves as the principal advisor to the Under Secretary of Defense (Acquisition, Technology, and Logistics) for policy and oversight of the military departments' logistics activities. In addition, DUSD (L&MR) oversees policy for DoD in specific functional areas of materiel readiness, materiel management, maintenance, transportation, logistics reinvention, and information systems, together with electronic commerce/electronic data interchange.

DUSD (L&MR) is supported by a staff of approximately 40 full-time DoD and private sector personnel. Since 1998, DUSD (L&MR) reorganized to emphasize support of logistics transformation by: (1) refocusing the supply policy group toward a more global supply chain integration mission; (2) establishing a Logistics Architect office; (3) creating a materiel readiness group to support new congressionally mandated responsibilities; and (4) organizing a Logistics Systems Modernization Office to accelerate implementation of new systems and technologies. In October 2000, direct responsibility for Defense Logistics Agency was added. Figure 2-2 depicts the new organization.

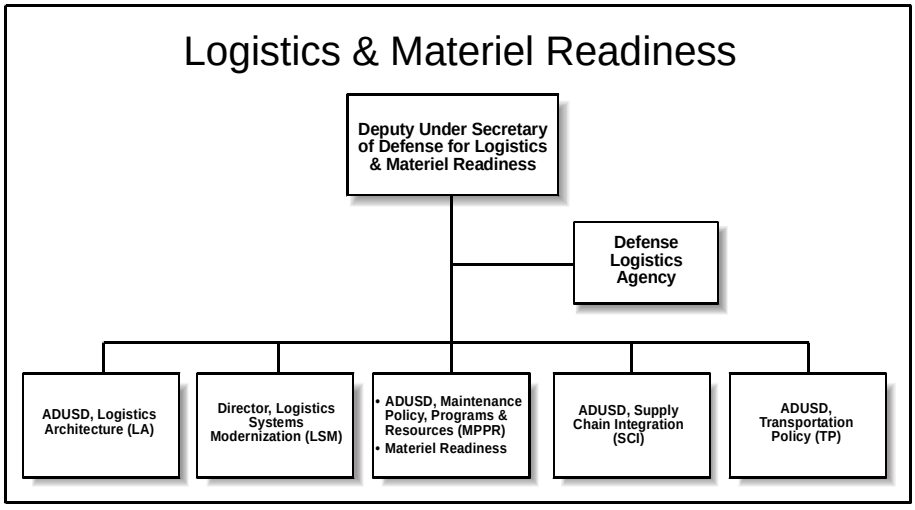
Accomplishments important to establishing the groundwork for future logistics transformation have been achieved by DUSD (L&MR) including the following actions:

- To support implementation of DoD's **Logistic Strategic Plan**, the Deputy Secretary of Defense directed the Military Services and Defense Agencies to report progress on the metrics and supporting logistics transformation plans in Defense Reform Initiative Directive 54 (DRID 54). The first annual Military Service and Defense Agency DRID 54 reports were provided with the FY2002–FY2007 POM. [6]

- To respond to Section 912 of the 1998 Defense Authorization Act and in recognition of the importance of future weapon system support, we chartered a **Product Support** (Appendix B, page B-1) Reengineering Implementation Team.[7] Senior service representatives coming together in a Logistics Transformation Leadership Group (LTLG) supported this effort. The Section 912 final report was published in July 1999,[8] and provided a 7-year roadmap to implement best practices, increase modernization through spares, and competitively source. The reengineered processes focus on cross-functional integration to enhance warfighter support while reducing costs. These practices are being tested on 30 pilot programs leading to a major "go-no go" decision in FY2002.

- To promote the migration of our logistics systems from the old "iron mountain" to a lean, agile delivery system focused on meeting new warfighter needs—but at even lower costs—we have championed the vision and initiatives provided in this paper under the banner of **Logistics Transformation**.

Figure 2-2. DUSD (L&MR) Organization



The Office of the DUSD (L&MR) has initiated several key actions to accelerate logistics transformation:

- Initiated a comprehensive **Logistics Architecture** effort to ensure logistics transformation meets operational requirements. The primary mission of the Logistics Architect is to design and guide implementation of a logistics

system that inherently meets the operational requirements of 2010. As such, the Logistics Architect effort encompasses performance requirements, processes, capital infrastructure, organizations and force structure, industrial base, and information systems.

- Reflecting true customer requirements by adopting a **Simplified Priority Ordering System** (Appendix B, page B-1). Across our supply and distribution systems today, DoD has up to 15 different priority codes that, quite simply, confound the delivery process and create unnecessary work and delays. This effort will include moving to a time-definite delivery standard and accurate asset visibility across the entire pipeline.

- Accelerating the adoption of the concepts of supply chain integration by sponsoring management forums and education opportunities, including the first ever DoD **Supply Chain Operations Reference (SCOR) Model** (Appendix B, page B-2) training. In partnership with the Supply Chain Council, Navy is prototyping the benchmarking of DoD logistics performance and DoD is developing modifications to the SCOR Model to address maintenance, repair, and overhaul.

- Leading the redirection, reorganization, and consolidation of maintenance activities. A key element of that effort is identifying **Core Maintenance** (Appendix B, page B-2) capabilities for depot maintenance activities. An independent critical evaluation of the core maintenance policy and methodology is being conducted.

- Establishing broad-based, multi-Service, Theatre CINC, and Defense Agency initiatives (to include industry) that will facilitate rapid development of **Automatic Identification Technology** (AIT) (Appendix B, page B-2) for DoD's logistics operations, and forming a DoD Logistics AIT office to oversee the program.

- Implementing **Management Reform Memorandum #6** (**Full Service Moving Project)** (Appendix B, page B-3), an important quality of life project, to streamline and simplify movement of household goods for military personnel.

- Implementing **Management Reform Memorandum #15, Reengineering Defense Transportation** (Appendix B, page B-3), documentation, and financial processes to reduce DoD's transportation bill payment infrastructure and strengthen DoD's partnership with the strategic commercial transportation partners that it relies on to deploy and sustain U.S. forces by significantly decreasing the timeliness of commercial carrier payment.

- In support of the Department's **Y2K** efforts, completed a logistics information systems baseline and analyses. More than 1,000 logistics informa-

tion systems were cataloged and assessed, which led to the formation of a permanent logistics information technology oversight group called the **IT Foundation Steering Group** (Appendix B, page B-4). [9]

- Establishing the **Logistics Information Board (LIB)** (Appendix B, page B-4) to provide a forum for resolving common logistics IT problems and to accelerate implementation of modernized business systems. Key actions include establishing a **Portfolio Management Program** (Appendix B, page B-5)**,** integrating the **Global Combat Support System** (Appendix B, page B-5) family of systems**,** and enabling **Web-Based Logistics** (Appendix B, page B-5) as the foundation for e-commerce.

- Initiated development of a **Customer Wait Time (CWT)** (Appendix B, page B-6) performance measure. The measure effectively reflects the speed with which the logistics system supports customers' requirements for materiel using wholesale and retail stocks as well as various other sources.

The implementation of logistics transformation is principally the responsibility of the Military Services, the United States Transportation Command, and the Defense Logistics Agency. Each logistics component has initiated implementation actions based on high-level DoD guidance, assessments of joint warfighting logistics support needs, and component-specific logistics support challenges. The rest of this section provides an overview of the major efforts by the components that constitute the logistics infrastructure. They are a combination of the Joint Staff, the Military Service organizations, and Defense Agencies. For each item in the highlighted text box, Appendix B provides a brief description and related references.

JOINT STAFF

- Automatic Information Technology
- Customer Wait Time/Time Definite Delivery
- Global Combat Support System
- Joint Logistics Warfighter Initiative
- Focused Logistics Wargame

With Joint Vision 2020, the Joint Staff has developed a clear picture of the future logistics support environment for the concept of Full Spectrum Dominance. The term *Full Spectrum Dominance* implies that U.S. forces are capable of conducting prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains—space, sea, land, air, and information. Focused Logistics is a critical element for achieving Full Spectrum Dominance and brings a more precise application of logistics with evolving concepts such as "Generation Force."

As a preamble to JV2020, the J4 has focused on the near-term initiatives required to lay the foundation for full spectrum dominance. These include rapid response and rapid distribution achieved with (1) **AIT-enabled** total asset and in-transit visibility, (2) business rules supporting interoperability, and (3) a reduced logistics footprint. Customer satisfaction will be achieved through minimizing **customer wait time** (Appendix B, page B-6) and achieving **time definite delivery** (Appendix B, page B-6) objectives. Real-time, exception based, actionable logistics information, leveraging web technology, and using a shared data environment are all key components to achieving real-time situational awareness.

The result of Focused Logistics will be a more capable deployed force that requires less continuous support. To evaluate and refine these improvements, the Joint Staff is co-sponsoring the **Joint Logistics Warfighting Initiative (JLWI)** (Appendix B, page B-7). While the project is just getting started, eventually JLWI will provide a test bed for new logistics concepts designed to support future operations.

The **Global Combat Support System (GCSS)** (Appendix B, page B-5) Family of Systems will provide the actionable data (timely and accurate), and a suite of joint decision support tools, to enable CINCs and their components to make their logisticians collaborative players with the operators. The J4-sponsored **Focused Logistics Wargame (FLOW)** (Appendix B, page B-7) brings the Unified Commanders, Joint Staff, Service, agency, multinational (United Kingdom, Australia, and Canada) logisticians and operations planners together to assess progress and identify gaps between programmed capabilities, Joint Vision 2020 Desired Operational Capabilities, and warfighter requirements.

ARMY LOGISTICS

- Velocity Management
- Single Stock Fund
- Wholesale Logistics Modernization Program

The Army Vision calls for a capability to put a combat capable brigade anywhere in the world in 96 hours; a division in 120 hours; and 5 divisions in 30 days. The Army Vision and Combat Service Support Transformation focus on enhancing deployment, reducing the logistics footprint in the battlespace, and reducing the total cost of logistics without jeopardizing warfighter combat capability. The Army Strategic Logistics Plan (ASLP) is the logistics community's implementation vehicle to achieve the goals of the Revolution in Military Logistics and Combat Service Support Transformation. The ASLP is the logistics community's vehicle to achieve the goals of the *Revolution in Military Logistics and Combat Service Support Transformation*. The ASLP outlines key program requirements to achieve logistics transformation, encompassing requirements in business process reengineering, organizations, materiel systems, and automated systems/information technologies.[10]

The Army Deputy Chief of Staff for Logistics (DCSLOG) is the Army's principal staff officer for development of logistics policy. Army Logistics Transformation envisions the transformation of the Army Materiel Command (AMC) to the Army Readiness Command, thus providing a single Army-wide logistics provider at the strategic, or national level, of logistics.

The Army is pursuing numerous logistics transformation initiatives to enhance deployability, reduce the logistics footprint in the battlespace, and reduce the total cost of logistics. These initiatives encompass programs in the areas of business process change, new organizations, materiel systems, and automation and information technologies. Among the key programs are **Velocity Management** (Appendix B, page B-8), **Single Stock Fund** (Appendix B, page B-8), National Maintenance Program, Direct Vendor Delivery; establishment of Theater Support Commands; fielding of improved distribution platforms (such as container roll-on/roll-off platforms, Movement Tracking System, Palletized Loading System), which all contribute to enhanced deployment and reduced footprint. Other major programs include Global Combat Support System-Army, **Wholesale Logistics Modernization Program** (Appendix B, page B-8), Combat Service Support Control System, and Transportation Coordinators' Automated Information Management System-II. Other recently evolving initiatives are also underway, ranging from Intermediate Support/Staging Base strategy to the use of combat/strategic/mission-configured loads. Science and Technology (S&T) plays an important role in the evolving Army Logistics Transformation. S&T investments will be essential for reducing the logistics footprint in the battlespace.

NAVY LOGISTICS

- High-Yield Logistics
- One-Touch Support
- Navy-Marine Corps Intranet

The operational mission of U.S. naval forces remains to project the nation's power and influence across the seas to foreign waters and shores in peace and war. The Navy's *Forward From the Sea* operational strategy defines the strategic concepts required to implement the responsibilities of naval expeditionary forces in peacetime operations, in responding to crises, and in regional conflicts. The Navy's principal initiative to transform its logistics processes to meet 21st century challenges is its **High-Yield Logistics** (Appendix B, page B-9) program.[11] The primary thrust of the Navy program is to replace mass inventories and organic infrastructure with information, rapid transportation, and improved private sector access through better commercial business relationships.

The Navy's senior logistician, the Deputy Chief of Naval Operations for Fleet Readiness & Logistics (N4), the principal staff advisor to the Chief of Naval Operations (CNO), is responsible for developing logistics policy for both Navy shore establishments and the Navy operating forces. The Navy wholesale logistics effort is divided among several commands. Naval Supply Systems Command

(NAVSUP) conducts overall supply systems management through one inventory control point. Naval Sea Systems Command (NAVSEA) oversees the three depot maintenance shipyards, two warfare centers, and two Trident repair facilities. Naval Air Systems Command (NAVAIR) provides aviation logistics support to include oversight of the three aviation maintenance depots.

One of the major implementation vehicles for High Yield Logistics is NAVSUP'S vision of **One-Touch Support** (Appendix B, page B-9), which is achieved by delivering world-class, customer-centric logistics support through globally integrated supply chain management. Building the connectivity through the **Navy-Marine Corps Intranet** (Appendix B, page B-9) will provide the foundation for exchanging real-time actionable information. Also, the Navy is implementing commercial enterprise resource planning systems at selected pilot activities to test the viability of commercial-off-the-shelf (COTS) applications for supply, maintenance, procurement, and financial applications. In addition, environmentally sound logistics, incorporating pollution prevention throughout the acquisition process, and proper environmental planning will support readiness while reducing costs, maintenance, and manpower requirements.

MARINE CORPS LOGISTICS

- Integrated Logistics Capability
- Marine Corps Materiel Command
- USMC-Academic-Industry Alliance

The centerpiece of the Marine Corps' strategy is the concept of Expeditionary Maneuver Warfare. This strategy uses operational forces to exploit an enemy's significant weaknesses by directing a decisive operation at elements of the enemy's forces that are essential to its ability to continue the struggle. The Marine Corps' Transformation Strategy is the fundamental document for future operational support, while the Logistics Campaign Plan sets the course for the next 6 years. The **Integrated Logistics Capability (ILC)** (Appendix B, page B-9) is the Marine Corps' near- to mid-term methodology for improving effectiveness using best business practices while retaining an operational focus.[12]

The Marine Corps Deputy Commandant for Installations and Logistics is the principal staff advisor to the Commandant of the Marine Corps for logistics policy. The establishment of the **Marine Corps Materiel Command** (Appendix B, page B-10) provides for a single agency to be responsible for materiel life-cycle management. Wholesale supply operations are relatively small because the Marines are supported largely through the Navy, Army, and Defense Logistics Agency. Marine Corps depot maintenance activity provides quality, responsive maintenance support to the Fleet Marine Force.

The Marine Corps has been exploring better business practices for its overall operational architecture. Through ILC, the Marine Corps plans to form strategic alliances among key business enterprise organizations and process owners and form a **Marine Corps-Academic-Industry logistics research and service alliance** (Appendix B, page B-10). To improve management decision-making capabilities, the ILC initiative will incorporate an integrated, data-sharing logistics information technology architecture and migration strategy, streamlined information technology acquisition processes and procedures, and a standard set of application programming interfaces to facilitate shared information among system applications.

AIR FORCE LOGISTICS

- Agile Logistics
- Logistics Transformation
- Product Support Strategies

The Air Force is transitioning to a new operational strategy for the 21st century. The strategy provides global situational awareness, the ability to orchestrate military operations throughout the theater, and the ability to bring intense firepower to bear over global distances, often within hours or days. To attain this operational vision, the Air Force has adopted an *Expeditionary Aerospace Force* strategy, a strategy that recognizes the inherent strengths of its agile combat support (ACS) core competency. Through further evolution of their **Agile Logistics** (Appendix B, page B-10) effort (a major pillar of ACS), the Air Force will rely increasingly on distributed (or reachback) operations to efficiently sustain its forces, providing time-definite delivery of needed capabilities. Fast, flexible, responsive, reliable support will be the foundation of all Air Force operations. The focus will be on improving support to the warfighter's combat capabilities in the 21st century.

The Deputy Chief of Staff for Installations and Logistics (DCS [I&L]) develops policy and provides resources to deliver effective agile combat support across the full spectrum of expeditionary aerospace force capabilities. The Air Force Materiel Command (AFMC) manages the integrated research, development, test, acquisition, and sustainment of weapons systems. AFMC provides combined wholesale supply inventory control point (ICP) support and depot maintenance support through Air Logistics Centers (ALCs).

The USAF **Logistics Transformation** (Appendix B, page B-11) process, spearheaded by an integrated team of industry and military professionals, is geared to assess end-to-end supply chain operations and develop plans and schedules to identify transformation opportunities of Air Force logistics processes for value-added change. Opportunities to partner with private industry, such as the Air Force's **Product Support Strategy** (Appendix B, page B-11) initiatives, will improve weapon system availability, halt or reduce cost increases, and alleviate performance shortfalls.[13]

UNITED STATES TRANSPORTATION COMMAND

- Reinvention CINC
- Defense Transportation System
- Strategic Distribution Management

The mission of United States Transportation Command (USTRANSCOM) is to provide air, land, and sea transportation for DoD in time of peace and war. The Commander in Chief of USTRANSCOM has combatant command of the military transportation component commands and their assigned transportation assets in both peacetime and war, and it is the single manager of defense transportation.

The U.S. Air Force's Air Mobility Command (AMC) provides airlift for USTRANSCOM. The annual cost of airlift operations is $2.9 billion. About 3.2 million ton/miles of cargo is moved annually. In an average week, AMC accomplishes about 1,700 missions. The U.S. Navy's Military Sealift Command (MSC) manages the sealift component of USTRANSCOM. MSC provides sealift with a fleet of government-owned and chartered U.S. flagships. Sea shipments consist of 857 million ton/miles, 3,400 tanker ship days, 7,400 prepositioned ship days, and 1,600 chartered ship days. MSC has a weekly average of 25 ships underway. The Military Traffic Management Command (MTMC) of the U.S. Army provides worldwide ocean port management and traffic management services. To expeditiously transport troops and materiel to ports of embarkation, MTMC provides the interface between DoD shippers and the commercial carrier industry. MTMC employs about 5,440 civilian and military personnel and averages about 9,900 shipments per week with an annual cost of operations of about $900 million.

In June 1998, Secretary of Defense William Cohen designated USCINCTRANS as the **Reinvention CINC** (Appendix B, page B-12), which provides USCINCTRANS with the expanded capability to emulate the best business practices of private industry. **The Defense Transportation System Enterprise Architecture (DTS EA)** (Appendix B, page B-12) is an essential initiative to build the transformed military transportation system of the future. When fully executed, the DTS EA will lay the groundwork for a reliable, rapid, secure, responsive, and survivable infrastructure that collects, collates, and presents voice, data, and video information wherever and whenever needed by warfighters and supporting elements. Finally, through such initiatives as the **Strategic Distribution Management Initiative** (Appendix B, page B-13), travel and household goods reengineering, and other efforts, USTRANSCOM is developing a streamlined, highly effective transportation network to meet future needs. It is designed to meet the full range of the nation's military transportation requirements.

DEFENSE LOGISTICS AGENCY

- DLA 21
- Strategic Sourcing
- Business Systems Modernization

The Defense Logistics Agency (DLA) buys and manages a vast number and variety of items used by all Military Services and some government agencies. Commodities include fuel, food, clothing, and medical supplies. DLA also buys and distributes consumable hardware and electronic items used to maintain and repair military equipment. DLA is transforming itself under **DLA 21** (Appendix B, page B-13) into a smaller, more agile Logistics Combat Support Agency to provide best-value solutions to the Joint Vision 2020 warfighter.[14]

In early 1992, the distribution functions of the Military Services and DLA were consolidated under DLA to form a single, unified supply distribution system. In addition to buying and distributing goods, DLA provides several other logistics support services. The Defense Logistics Information Service manages the Federal Supply Catalog System for more than 7 million items. The Defense National Stockpile of strategic and critical materials is maintained to reduce the nation's dependence on foreign sources of supply for such materials in times of national emergency. The Defense Reutilization and Marketing Service provides for the redistribution and disposal of DoD equipment and supplies no longer needed by the original user.

DLA 21 has five focus areas. The first focus area is **Strategic Sourcing** (Appendix B, page B-13) where DLA will shift to commercial practices, best-value sourcing, acquisition reform, supply chain solutions, and corporate contracting. In the second focus area, DLA will develop a more responsive *customer focus* to include partnerships, tailored support, on-site representatives, and creative stock positioning. In its third focus, DLA will undergo an *organizational redesign* to create an enterprise approach with a supply chain focus and information as a commodity. In the fourth focus area, DLA is committed to *workforce development*, emphasizing retention and training, developing multi-skilled personnel, and taking advantage of knowledge management. In the fifth focus area, DLA 21 incorporates **Business Systems Modernization** (Appendix B, page B-14), where an enterprise resource planning application will replace legacy systems and facilitate the use of best commercial practices and improve the ability to update software and processes in a rapidly changing environment.

OVERALL ASSESSMENT OF DOD LOGISTICS TRANSFORMATION EFFORTS

The initiatives outlined above represent the significant transformation effort underway throughout the Department's logistics components. Collectively, these programs illustrate great accomplishment and even greater potential.

In 1999, Congress tasked the Military Services to submit a schedule for implementing best commercial inventory practices for the acquisition and distribution of secondary inventory items. DoD used this requirement as an opportunity to present Congress with each component's key initiatives that form the critical baseline for the logistics process transformation. Subsequently, Congress asked GAO to evaluate the Services' submissions. [15, 16, 17] Following is a summary of the GAO's findings:

> "While the initiatives are generally guided by broad direction, there is no comprehensive strategy or plan that guides the specific efforts. Consequently, no detailed framework exists to increase the likelihood that the initiatives are coordinated and do not conflict or duplicate efforts. Also, there are no specific performance goals established to measure the overall results of the initiatives."

In the response to the GAO, DoD (while citing a substantial degree of progress) generally agreed that the institutional framework for management of logistics transformation could be improved. The continuing management and reporting requirements of DRID No. 54, "Defense Logistics Transformation," go a long way toward satisfying the concerns raised by GAO. The FY2000 DoD Logistics Strategic Plan provides the basic structure for DRID No. 54 transformation plans.

Section 3
Logistics Vision—Focus

LOGISTICS STRATEGIC PLAN

The FY2000 edition of the DoD Logistics Strategic Plan was developed by the Logistics Reform Senior Steering Group (LRSSG), as discussed in Section 2. Through a series of facilitated workshops, the LRSSG prepared a *DoD Logistics Strategic Plan*[18] that demonstrates strong senior leadership commitment to logistics transformation, beginning with the DoD logistics mission statement:

> ***"To provide responsive and cost-effective support to ensure readiness and sustainability for the total force across the spectrum of military operations."***

The plan was designed to focus the collective attention and resources necessary for achieving the key objectives required to improve logistics support to the warfighter. To this end, the plan established the following vision statement for future DoD logistics:

> ***"By 2006, the joint logistics process will be a highly efficient, integrated system that ensures required support to the Warfighter."***

The target of the Logistics Strategic Plan is a high level of logistics excellence that engenders full warfighter confidence in the logistics process. Our objective for DoD logistics, now and in the future, is to meet warfighter needs and gain customer confidence by providing **the right product, delivered to the right place, in the right condition and packaging, in the right quantity, at the right cost, to the right customer, and at the right time—ALL THE TIME**.

The Logistics Strategic Plan vision for DoD logistics presupposes the Department's ability and commitment to implement substantial logistics process changes. For defense logistics, the process improvement requirements of Joint Vision 2020, the Defense Reform Initiative (DRI),[19] and the New Workforce Vision are analogous to similar initiatives that originated several years ago in the private sector and continue there today. In fact, a general premise of logistics transformation is the adoption of proven private sector business practices that can facilitate and accelerate necessary changes.

The DoD Logistics Strategic Plan established six strategic objectives to assist logistics managers in planning and executing the priority initiatives for transforming DoD logistics. Each objective has a quantifiable performance measure that links

management objectives to operating activities. Following are the six Logistics Strategic Plan objectives along with the key performance measures for each objective and the implementation status for each measurement consistent with the Component's latest status (reported in the FY2000 DRID 54 submission):

1. ***Optimize support to the warfighter***. Because Mission Capable (MC) rates are a primary measure of warfighter support, the military components will determine their existing aggregate MC rates and establish appropriate goals for higher aggregate MC rates within specified timeframes**.**

   Mission Capable Rates: The Strategic Plan requires annual reporting of progress against FY2006 MC rate targets beginning at the end of FY2001. The initial reporting for MC rate targets and performance is expected in the FY2001 submission.

2. ***Improve strategic mobility to meet warfighter requirements.*** To improve support to the warfighter, increase cargo airlift capacity and sealift surge and afloat preposition capacity to meet current DoD guidance; also develop a measurement approach and appropriate targets for mobility infrastructure and mobility process improvements.

   Airlift/Sealift/Afloat Preposition Capacity: The Strategic Plan requires by the end of FY2006 that the Department meet the validated requirements in the current Mobility Requirements Study (MRS-05). Measurement toward achievement of cargo airlift capacity, sealift surge, and afloat preposition capacity have been deferred pending publication of MRS-05.

   Mobility Infrastructure and Process Improvements: The Strategic Plan requires development of a measurement plan and goals by the end of FY2001 and achievement of the goals by FY2006. Both the plan and establishment of goals have been deferred pending publication of MRS-05.

3. ***Implement customer wait time (CWT) as the DoD logistics metric***. In general, CWT is considered to be the total elapsed time between issuance of a customer order and satisfaction of that order. This objective will establish CWT as a key DoD performance metric and will require refining the definition of CWT, developing appropriate measures, and implementing them.

   Customer Wait Time: The Strategic Plan requires development of a definition and process for CWT by the end of FY2001 and full implementation of all CWT measurement by the end of FY2006. The Department is transitioning from Logistics Response Time measurement to Customer Wait Time. The capability to capture and report CWT is under development.

4. ***Fully implement joint total asset visibility (TAV) across DoD***. TAV is the capability for users to view information on the identity and status of DoD

material assets and to facilitate execution of business transactions using that information. DoD material assets to be included are in-storage (wholesale and retail), in-process (maintenance and procurement), and in-transit.

Total Asset Visibility: The Strategic Plan requires development of business rules and associated measurement by the end of FY2000 and achievement of 100 percent visibility by FY2006. This is also a Government Performance and Results Act goal. Both goals and current performance are reported quarterly.

5. ***Reengineer and modernize applicable logistics processes and systems***. As DoD moves toward replacing legacy logistics business systems with modern, Defense Information Infrastructure/Common Operating Environment (DII/COE) compliant automated data processing systems, measuring and reporting progress is essential. Components will develop modernization plans and targets for increasing the proportion of modernized logistics business systems, as well as a capability to quantify progress made, which will be reported annually.

   Logistics Systems Modernization Plans: The Strategic Plan requires, by the end of FY2001, development of Component logistics processes and systems modernization plans through FY2006 and annual tracking of progress. In DRID 54, the Components provided key activities, milestones, and resource requirements for logistics systems modernization.

6. ***Minimize logistics costs while meeting warfighter requirements***. Reduce the overall cost of logistics support for selected weapon systems by FY2006. Logistics support includes elements such as maintenance, supply, distribution, transportation, and combatant logistics.

   Weapon System Support Cost Reductions: The Strategic Plan requires for selected systems, logistics support cost reductions per year compared to FY1997 baseline as follows: 7 percent by FY2000; 10 percent by FY2001; and a stretch target of 20 percent by the end of FY2005. Service reports for this goal are incomplete. A more formal reporting process may need to be developed.

LOGISTICS ARCHITECTURE

To achieve the DoD Logistics Strategic Plan goals, DUSD (L&MR) established the Assistant Deputy Under Secretary of Defense (Logistics Architecture) in November 1999. The primary mission of the Logistics Architect is to design and guide implementation of a logistics system that inherently meets the operational requirements of 2010.[20] As such, the Logistics Architect effort encompasses performance requirements, processes, capital infrastructure, organizations and force structure, industrial base, and information systems. During the first year of

operation, the logistics architecture effort focused on assembling and assessing operational requirements, preparing a preliminary operational architecture, and coordinating the preliminary architecture with the Joint Staff, Services, DLA, and the CINCs. The following specific actions were completed:

- Operational requirements to support the National Military Strategy were synthesized into specific quantifiable performance.
- Preliminary architecture was developed and coordinated with the Services, CINCs, DLA, and Joint Staff.
- Supporting business rules by class of supply were developed in coordination with the Services.
- Consensus was achieved on critical issues such as overall architecture characteristics, end-to-end supply chain management responsibility, end-to-end transportation responsibility, and enabling CINC support organizations.

Following is a summary of the key characteristics of the envisioned operational architecture:

- Logistics products and services tailored to the mutual performance expectations of operational customers and logistics providers;
- Highly reliable, consistent logistics performance that minimizes the need for human interface;
- National ownership of materiel and services to the point of consumption; resource responsibility remains with the operational customer;
- Logistics and financial transactions transparent at the operational level;
- Logistics chains managed or synchronized by the primary service provider to the operational customer;
- Optimized distribution across the logistics chain with minimized handling and redistribution in forward areas;
- Health monitoring technology (prognostics, diagnostics) to maximize supportability and readiness of major systems (platforms, armaments, combat support);
- Assured end-to-end communications to support logistics operations;
- Decision support tools in an integrated data environment deployed to manage logistics processes and materiel flows;

- Differentiation of logistics professionals by attainment of broad-based competency standards;
- Personnel performance rating system tied to output and customer satisfaction; and
- Capability and capacity sized to support national security strategy.

Clearly, to implement the above characteristics, DUSD (L&MR) must continue close coordination with other key OSD offices. Primary offices for coordination include: OSD Program Analysis and Evaluation for Program Objective Memorandum issues; Under Secretary of Defense Comptroller for financial transactions; and Under Secretary of Defense (Personnel and Readiness) for workforce development.

Section 4
Logistics Transformation—Accelerate

DoD has the most effective logistics system in the world; however, we are not ready for the challenges of 2010 and beyond. Our logistics system lacks flexibility, mobility, efficiency, and interoperability. Many of our logistics information systems are more than 30 years old and still rely on batch processing. In recent years we have seen material backorders add months to repair procedures, and cannibalizations are increasing. There is a widening gap between DoD and industry best practices.

As detailed in Section 2, numerous logistics transformation initiatives are under development and proceeding toward implementation both at OSD and the Component level. As GAO pointed out, an institutional framework for management of logistics transformation is needed to achieve the vision as outlined in Section 3. A principal question, then, follows: "How does DoD proceed in a manner that maximizes return on current investment and builds a fully integrated, comprehensive, and coordinated logistics process for the future?" Part of the answer lies in the formulation and dissemination of broad-based implementation principles to guide and tie together the individual initiatives. Four critical issues to the acceleration of logistics transformation that need the development of specific principles are outlined below.

MEASURE IMPACT ON WARFIGHTER CONFIDENCE

Since the end of the cold war, DoD military and civilian leadership has struggled to redefine the Department's role in the context of a New World military paradigm. The DoD logistics community has faced this same dilemma in dealing with political, economic, and technological changes. The logistics requirements in the first decade of the 21st century represent a significant challenge to managers and personnel throughout DoD. In particular, the increase in joint operations and reliance on the private sector emphasize cooperation and coordination on a scale rarely encountered. The focus on situational awareness needs to begin with satisfying customer requirements at the point of need. This issue is of the highest priority to the J4 and DUSD (L&MR) as they together lead the logistics community's efforts to accelerate logistics transformation.

The magnitude of restructuring to meet the challenge requires a long-term, committed approach to process and product improvements that are focused on output rather than input. Our ability to focus on real-time situational awareness requires adopting and using customer-focused, output-based performance metrics. A good example of the required paradigm shift is the groundbreaking Strategic Distribution Management Initiative (SDMI) the U. S. Transportation Command and the

Defense Logistics Agency are accomplishing in partnership. This effort focuses on defining, measuring, and improving the overall effectiveness and design of DoD's global distribution and transportation and supply chain management system. The ultimate objective is to create improved, synchronized processes to execute and measure logistics support to joint warfighting force requirements.[21]

This increased focus on output, enabled by measured, actionable initiatives, is designed to improve warfighter confidence in the logistics process and to improve service accuracy, timeliness, and order fulfillment rates. This increased effectiveness must occur concurrently while attaining reduced total logistics operating costs.

RECOMMENDATION: Accelerate efforts to implement customer wait time/time definite delivery measurement concepts. In parallel, review all continuing and new logistics-related initiatives to ensure that output metrics are focused on warfighter confidence.

DEFINE FUTURE LOGISTICS ENVIRONMENT

Understanding logistics transformation requires a deep appreciation for the difference between making improvements from past performance and progressing toward the achievement of a targeted destination environment. DoD logistics transformation must be an easily understood, widely accepted operational vision—Focused Logistics. As noted in Section 2, Focused Logistics in Joint Vision 2010 depends on rapid response and distribution, achieved with enabled total asset and in-transit visibility, business rules supporting interoperability, and a reduced logistics "footprint."

The ongoing operational architecture initiative has been accepted widely as a means of defining the strategic logistics network of the future, including notional concepts, material flows, information channels, and financial responsibilities. In short, the proposed operational architecture definition is sufficient to permit a clear description of the world-class DoD integrated logistics environment of 2010. This is the environment that results in the highest level of warfighter confidence by providing effective support through exception-based, real-time actionable information to the warfighter. Because the logistics architecture is focused on national operational needs, it directly links logistics transformation to national security objectives.

RECOMMENDATION: Accelerate service leader and civilian awareness of the requirements and preliminary design developed in Phase One of the operational logistics architecture program and complete the Phase Two detailed design sooner than the projected 2002 target date, if possible.

IMPROVE INFORMATION TECHNOLOGY APPLICATION

Major efforts are underway to improve or eliminate (or both) the more than 1,000 logistics-related information systems identified in the Y2K remediation; however, every Service and agency relies daily on uncoordinated business processes and out-of-date information systems. Further, these largely uncoordinated initiatives are costing more than $1.5 billion annually. These Service- and agency-sponsored programs need to be aligned with DoD's overall logistics vision. We also must establish standards for applications and ensure that we have effective information assurance. The DoD Logistics Information Board (LIB) already has taken significant steps to attain these objectives. Under the portfolio management concept, efforts continue to ensure fully compatible transactional interfaces across logistics domains, to develop an integrated product data environment, and to focus information technology investments on priority needs.

Conceptually, the resulting "end state" will include the following five flows: (1) the information triggers the order; (2) a decision determines where to source the asset; (3) the asset is moved physically; (4) the movement is financially accounted for; and (5) the transaction effectiveness is evaluated against customer service and cost objectives. Information technology is critical to each process. These processes must be simple and efficient to facilitate the constant training required. The output must provide real-time situational awareness and actionable information. Considering that more than a million logistics transactions are processed daily, simplified processes must translate and transmit data anywhere into actionable information everywhere on a timely basis.

Efforts are underway to solidify the information technology foundation necessary to support all logistics initiatives. These efforts are jointly supported by the C3I, logistics, and acquisition communities, and they include integrated data environment, portfolio management, and information assurance.

RECOMMENDATION: Accelerate current Logistics IT Foundation initiative visibility to both senior OSD, CIO community and Component logistics, and IT leaders through focused attention on the potential for increased sharing of joint IT initiatives such as with the eight independent ERP projects underway.

ESTABLISH FORCING FUNCTION

The ultimate challenge to accelerating logistics transformation is to transition within an environment where there may not be a readily apparent burning platform for change. This lack of a single driving force for change generates the need to identify and embrace an external forcing function to provide the required degree of urgency to effect focused, integrated change.

DoD logistics is a complex, massive structure of organizations, processes, and systems. It is incomparable in size, with huge numbers of personnel, resources,

materiel, and facilities involved in important, day-to-day military operations. Often the practical alternative to achieving long-range change has required near-term work-arounds using inefficient, manpower-intensive efforts. Crisis management is often the order of the day because failure in the short term is simply unacceptable. This continuous focus on immediate issues often has resulted in the frustrating inability to attain desired levels of real progress against our broad, long-range process improvement objectives.

The forcing function over the past decade has been a desire by senior leaders to increase weapon system modernization funding and using logistics funds as the bill payer. As we look into the future, other forcing functions, either real or perceived, need to be evaluated. These include the following:

- ***Users in control***. The future logistics system must provide timely support to educated customers who now may exercise greater *choices* of suppliers, while considering cost, time, and performance factors when making purchases for goods and services. When warfighters understand how much it costs to own and operate frontline weapon systems, they will begin to demand more reliability and options on how to maintain them.

- ***Strategic Sourcing***. The drive to move logistics processes outside of direct DoD control to commercial activities is viewed as a way to cut costs and promote effectiveness. It is based on the belief that outsourcing is the most efficient way to take advantage of commercial best practices. Another form of outsourcing is private/public partnerships. This forcing function is similar to outsourcing, but maintains an organic support capability. It takes advantage of the best practices of both the commercial and public sector logistics support.

- ***Consolidation***. Many defense leaders believe that individual Service logistics support organizations are duplicative and inefficient. The Title 10 argument is used most often to counter consolidating Service logistics organizations under a single agency or unified command organization. However, while the sheer scale of the U.S. military may make logistics command unification out of the question, it is an option, and we need to monitor carefully the progress of several allies in their command unification processes.

- ***Recruitment and Retention***. A possible forcing function could be the inability to retain and recruit military and civilian personnel. Tomorrow's warfighters will become increasingly less tolerant of a military that asks them to be willing to put their lives at risk, then supports them with logistics processes and systems inferior to those they have become accustomed to in their private lives. In the end, if warfighters do not experience a real logistics transformation leading to increased warfighter confidence, poor logistics support is certain to become an increasingly important reason why people leave the military.

- ***Force Projection***. The Mobility Requirements Study (MRS-05) will identify sealift, airlift, and afloat prepositioned capacity requirements as well as shortfalls based on a Bottom Up Review Update. MRS-05 shortfalls along with the logistics support required to meet new rapid force deployment objectives will put increased stress on our logistics systems. Meeting these new force projection requirements could be used as a forcing function to achieve logistics transformation.

- ***Homeland Defense***. Senior leaders are thinking more seriously about a new and difficult security challenge. While past threats were aimed primarily at U.S. forces overseas, the proliferation of missiles and weapons of mass destruction, terrorism, and attacks on our information infrastructure could directly affect security at home. The Secretary of Defense has noted that a terrorist attack with weapons of mass destruction would quickly overwhelm any local response and that no institution in the country has the organizational and logistics capability to respond more effectively than DoD. We will have to rethink basic policies and the allocation of resources to meet this newly recognized potential defense task.

Consideration of any or all of these potential driving forces must be carefully tempered with balanced, credible, consistent decision criteria. Our concept of a logistics transformation envisions a logistics footprint for the 21st century that is the precise balance between "just in case" and "just in time," to provide time-definite support to the warfighting mission—the essence of *Focused Logistics.* Equally important, this concept mandates the capability of future logistics processes to respond effectively to a wide range of potential crises. In any case, a review of the full range of available options must occur early in the new Administration. Finally, this investigation should include prompt evaluation of options to improve the logistics leadership experience. As proven in the private sector, options to be considered should include such "tough issues" as exchange of logistics officers between services and lengthening the tours of logistics transformation leaders.

RECOMMENDATION: The new DUSD (L&MR) should engage senior DoD leadership in the review of all options for accelerating logistics transformation, identifying a specific forcing function, improving leadership continuity, elevating the reporting relationship of logistics leaders in OSD and the Components, and exploring options to improve the logistics leadership experience.

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Appendix A
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USTRANSCOM DCINC	LTG Daniel E. Brown, USA	(618) 229-3810

Appendix B
DoD Logistics Initiatives

DoD-Wide Logistics Initiatives*

Product Support Reengineering

Product support changes the structure of logistics support from a functional orientation to a weapon system orientation. It is an integrated package of support functions required to maintain the readiness and operational capability of a weapon system or subsystem. This includes materiel management, distribution, technical data management, maintenance (excluding operational level maintenance), engineering support, training, cataloging, repair parts management, failure reporting and analysis, reliability growth, and configuration management. The source of support may be organic or commercial, or a combination of both, integrated by a single activity under the direction and funding of the weapon system program manager. Product support concepts are being tested by the 30 reduction in total ownership cost (RTOC) pilot programs. The support process is being reengineered in three phases. The first phase established the new product support environment by providing information to program managers and removing policy barriers. The second phase starting in FY2000 initiated tests in several pilot programs. Lessons learned from these tests will be applied to full-scale implementation in the third phase starting in FY2002. The goal is to establish an integrated supply chain for each weapon system to optimize customer support, achieve maximum weapon system availability at the lowest total ownership cost, improve operational performance, and increase readiness.[22]

Simplified Priority Ordering System

The current priority system with the DoD supply chain provides for 15 different issue priorities and 3 different transportation priorities with different time standards for different regions of the world. After reviewing the effectiveness of this system, the Joint Chiefs of Staff concluded that this complex but seemingly comprehensive system was not always delivering materiel to military personnel in the field when needed. This OSD initiative aims to correct the situation with a simplified system that focuses on time-definite delivery (TDD) standards. The objective of using such standards is to ensure that the DoD supply chain delivers materiel orders to customers within the time frames needed.[23]

*The Component (or staff office) directly responsible for each initiative provided these descriptions.

Supply Chain Operations Reference Model

Several DoD logistics organizations have adopted the Supply Chain Operations Reference (SCOR) model as a primary process analysis tool to assist in implementation of the supply chain management concept. SCOR is a process model frequently used to describe a supply chain to make it understandable. The industry Supply Chain Council created the SCOR model to allow organizations to communicate using common terminology and standard descriptions; leverage metrics and benchmarking to determine performance goals, set priorities, and quantify the benefits of process changes; understand the practices yielding the best performance; understand the supply chain management process, and evaluate overall performance; and to identify the best software tools for their process requirements.[24]

Identifying DoD Depot-Level Maintenance Core Capability Requirements

To accomplish depot maintenance, DoD uses a combination of organic capability (government workers and resources) and commercial contractors. A longstanding issue is how much of the maintenance workload is core to DoD and, therefore, should be accomplished organically—enabling DoD to better handle a wartime maintenance surge and other responsiveness requirements.

Despite the creation of a uniform decision methodology, and subsequent implementation by all the Services, there have been substantial and inconsistent shifts in the Services' stated core capability requirements over time. Concerned that the existing methodology may be inadequately justified and inconsistently applied—with a net result that core requirements may be misstated—the DUSD (L&MR) directed an independent critical evaluation of the policy and methodology implementation. Among the preliminary findings of the contract team are: (1) that DoD policy is fragmented and not uniformly applied by the Services, and (2) that DoD practices are not fully consistent with contemporary approaches to considering core capability requirements.. In a subsequent phase the team will draft proposed policy to implement recommendations.[25]

Development of Automatic Identification Technology

This initiative will integrate automatic identification technology (AIT) into logistics business processes to facilitate the collection of initial source data, reduce processing times, improve accuracy, and enhance asset visibility. AIT encompasses various data storage media that carry asset identification information. The information transfers electronically to and from automated information systems (AISs) that support DoD asset visibility and logistics operations. AIT improves logistics business processes and enhances warfighting capability. A task force established by DUSD (L&MR) developed a logistics AIT concept of operations to provide a vision of integrating existing and new AIT to support future logistics operations. The task force developed an implementation plan providing

overarching guidance and direction for implementing AIT in logistics operations. Organizations will apply AIT devices to support their business processes and the AIT requirements of all users in the DoD logistics chain.[26]

Management Reform Memorandum #6 (Full Service Moving Project)—Streamlining and Simplifying Movement of Household Goods

Improving the current household goods movement system is a critical quality of life issue and is one of the Secretary of Defense's nine Defense Reform Initiatives. The current program is virtually unchanged during the past 35 years. USTRANSCOM, in conjunction with ADUSD (TP), was tasked to develop and implement a plan to streamline and simplify the movement of household goods by service personnel. As a result, DoD is conducting several different but related pilot programs. The pilots include MTMC Reengineering Pilot, Full Service Moving Project (FSMP), and Sailor Arranged Move (SAM). USTRANSCOM was tasked by ADUSD (TP) to evaluate each of the pilot programs. The evaluation of the MTMC pilot program began in June 2000 and FSMP is projected for March 2001. The SAM pilot will be evaluated using the Navy SAM Report. After a thorough evaluation of the pilot programs, USTRANSCOM, in conjunction with the Services, will forward a recommendation for one pilot program, or a combination of features from the respective programs to ADUSD (TP). The recommendation will streamline personal property movement and provide improved quality of life for service members and best value for DoD. The recommendation for a new DoD Personal Property Program is anticipated by second quarter FY2002. [27]

Management Reform Memorandum #15, Reengineering Defense Transportation Documentation and Financial Processes

DoD is implementing an extensive Deputy Secretary of Defense-directed reengineering effort to streamline and improve defense transportation documentation and financial processes. The goal of the initiative is to use commercial documentation rather than DoD-unique documentation and to implement a third-party payment process, U.S. Bank's PowerTrack, to significantly reduce DoD's commercial transportation payment infrastructure, process costs, and substantially decrease the time for payments to commercial carrier partners. Through implementation of the reengineered process, the Department is strengthening its partnership with the strategic commercial transportation partners that it relies on to deploy and sustain U.S. forces and reducing infrastructure costs for both the DoD and its commercial partners. In addition, the new process will result in a single, comprehensive transportation financial data repository for use in planning and decision-making.[28]

Logistics IT Foundation

This initiative brings together three key logistics information technology (IT) functions that enable success on the battlefield. It is designed to increase senior management awareness of operational and product data, assured information infrastructure, and portfolio management to improve assessments of Logistics IT. “Operational data” refers to transactional data that use commercial EDI and XML protocols for conducting electronic commerce and electron business processes. Also included is product data that permit technical documents to be transmitted and refreshed from central sites in real time. “Assured information infrasturucture” refers to issues of adequate bandwidth for logistics applications and security for those transmissions. “Portfolio management” refers to a way toprovide a vehicle to assess and improve Logistics IT mission objectives. The Logistics Foundation initiative is the effort to ensure that warfighters are provided responsive and assured logistics information to pursue a war and win it. To accomplish its goal, the foundation initiative is designed to fully leverage commercial information technology to minimize DoD’s budgets. It is also designed to ensure that the Commanders in Charge and Services have secure but unclassified systems to meet all operational requirements in peacetime and in wartime.

Creation of Logistics Information Board (LIB)

The Defense Logistics Information Board (LIB) provides a forum for senior managers from the Offices of the Secretary of Defense for Logistics & Materiel Readiness, Joint Chiefs of Staff (J-4, Logistics), USTRANSCOM, and logistics elements of the Military Services and Defense Agencies. Its purpose is to review and resolve issues regarding the information requirements associated with logistics policies, procedures, business practices, and to ensure that budgetary priorities support operational needs. The LIB reviews and advises the DUSD (L&MR) and other OSD offices on the development and management of the functional and technical strategies to revise, modernize, and maintain the logistics information infrastructure. In addition, the LIB provides oversight of requirements on behalf of the DUSD (L&MR) and senior logistics authorities and supports the DUSD (L&MR) in the overall centralized planning of logistics information requirements. The Services, USTRANSCOM, and DLA are responsible for executing the plans.[29]

One of the principle focuses of the LIB is to integrate the warfighter logistics informational needs with the information exchange requirements of the rest of the logistics community, and ensure all requirements are addressed in the Service/Agency/Joint Global Combat Support System (GCSS) family of logistics information systems.

Portfolio Management Program

This initiative is designed to bring DoD's logistics activities into compliance with the Clinger-Cohen Act. Clinger-Cohen requires agencies to develop capital plans, set IT goals and metrics, document IT architectures, and assess the skills of the IT workforce. Logistics is developing portfolio management criteria to formalize annual assessments of how IT systems are working together to improve overall Defense capabilities, to identify changes to requirements, and to continue, modify, or terminate existing IT investments. Portfolio management guides the management and oversight of IT portfolio activities that (1) analyze the mission area to identify operational and business needs; (2) select the best mix of IT investments to achieve mission outcomes; (3) control both the portfolio and individual system IT investments as they are developed and tested; and (4) evaluate the actual capability in the field to feed back lessons learned and identify unmet requirements.[30]

Global Combat Support System (GCSS)

Global Combat Support System (GCSS) is a family of systems strategy that establishes information/data interoperability across combat support information systems and between combat support and command and control functions in support of the Joint Warfighter. GCSS will provide for unimpeded access to information regardless of source, and the ability to fuse information from disparate sources into a cohesive common operational picture. GCSS will substantially improve asset visibility for the warfighter and for the logistics support community via the Common Operational Picture-Combat Support Enabled (COP-CSE), an overlay system to provide logistics information to the current GCCS COP. GCSS is centrally managed by J4 and decentrally executed by the Services and Combat Support Agencies such as the Defense Information Systems Agency (DISA) and the Defense Logistics Agency (DLA). [31, 32, 33, 34]

Web-Based Logistics

Web-based logistics will transform existing serial, sequenced, batch processing into a real-time set of logistics management systems that will connect enterprises with customers, suppliers, and transportation providers worldwide. Benefits include reduced processing costs, accelerated decision-making, improved communications, and enhanced customer service. Web-based logistics does not involve replacing all servers with Web servers. Although user access will improve significantly, machine-to-machine still will be the dominant communications path. With more than three billion transactions each year, removing the "human" from the process is essential to accelerate logistics processes. The Logistics Foundation Initiative developed a working definition, stipulating the following five criteria for web-based logistics:

- Network Centric—A logistics requirement is known at once (nearly) by all potential sources. The system responds as one to the requirement (whether

human or automatically generated), providing near real-time feedback to the customer that creates or validates an expectation of service, offering actionable options if the full requirement will not be met. An analogy is the Aegis weapon system and how its components work together to acquire and respond to a target.

- Browser Technology—Human interfaces should be browser-based (or be the functional equivalent).

- Data Access—Data should be accessible by hypertext markup language (HTML), extensible markup language (XML) and other World Wide Web protocols, providing hypertext links and virtual data base access. XML should be used to turn historical transaction data and other product data into a virtual database searchable over communications media based on Internet protocols. Users and their computers should be offered full data visibility; that is, using semantic standards (i.e., sets of XML protocols for a given industry or trading relationship) or published translations, and directory services, needed data are automatically accessible.

- Communications Medium and Security—Communications should be provided by SIPRNET, NIPRNET, or the Internet. Information protection to prevent data compromise, corruption, or service denial is provided commensurate with the value of the information to military operations and adversaries. Examples of commercial protection include secure socket layer (SSL), virtual private networks (VPNs) and public key infrastructure (PKI). Communications media should provide bandwidth adequate to support network-centric logistics through the last tactical mile and from the last 100 feet in CONUS theater.

- Quality of Service—At a minimum, users should be provided the quality of service currently available in comparable commercial logistics sectors (system availability and response time). The systems should provide "mass customization"—automatic recognition of customer-unique attributes and requirements history. All available options to meet a requirement are presented to the customer as choices.

Web-based also could include: (1) thin-client architectures for hardware efficiency; (2) thin-client applications for software configuration control and data management; (3) data distribution tailored to the smallest device; and (4) extensive use of Web development and integration tools and applications.[35]

Customer Wait Time (CWT) and Time Definite Delivery (TDD)

Customer Wait Time (CWT) is a measurement of the total elapsed time between the issuance of a customer order and satisfaction of that order. Ideally, the measurement of CWT should eventually encompass all customer orders, regardless of the commodity or the source of the material, to include immediate issues from

both wholesale and retail stocks, backorders, and various other arrangements such as direct vendor delivery and items acquired using Government purchase cards. Time Definite Delivery (TDD) is the concept that, with a specified degree of probability (e.g., 95 percent), the logistics system is capable of delivering required materiel to the customer within a given period of time. Implementation of TDD will assure customer confidence in the responsiveness of the logistics system. [18, 36]

Joint Logistics Warfighting Initiative

The Joint Logistics Warfighting Initiative (JLWI) is a Department of Defense program that provides an environment to conduct joint and component logistics demonstrations. The goals of the program are to reengineer the processes and functions, insert new and emerging technologies to improve unit and weapon system readiness as they relate to the requisition, distribution, and retrograde processes for Class IX repair parts. USCENTCOM provides the geographic and operational focus for this initiative. Some demonstrations may be outside the physical boundaries of the USCENTCOM area of operations. JLWI demonstrations include development of a web-based requisitioning capability and theater-level integrated data environment that provides real-time asset visibility from the authoritative source. JLWI will instill warfighter confidence through the measurement and evaluation of customer wait time metrics and time-definite delivery standards. JLWI demonstrations will be conducted at a laboratory established at the Joint Interoperability Test Center at Indian Head, Maryland. As concepts are successfully demonstrated, they will be inserted into the USCENTCOM area in support of joint operations and exercises in the region. This program integrates and demonstrates several initiatives (e.g., web-based requisitioning; Strategic Distribution Management Initiative; Joint Theater Distribution; Common Access Card) at the operational and tactical levels. Exercise Bright Star, which will be conducted in September and October 2001, will serve as the initial milestone event to demonstrate JLWI to the warfighter. [37]

Focused Logistics Wargame (FLOW)

The Focused Logistics Wargame (FLOW) is the only true joint logistics capability assessment. FLOW is a 2-year effort, with the next game (FLOW 2001) scheduled at the Air Force Wargaming Institute, Maxwell Air Force Base, Montgomery, Alabama, from 22-26 October 2001. It provides a mechanism for applying and assessing technological breakthroughs, joint logistics doctrine, and the desired operational capabilities required to meet Joint Vision 2010 Focused Logistics challenges. FLOW 2001 is a single sided, seminar-style game, with a static scenario. The Joint Staff Director for Logistics (J-4) will provide game oversight with all Services, Unified Commands, Multinationals (United Kingdom, Australia, and Canada), plus selected agencies participating. FLOW 2001 game design will feature a pillar structure that closely resembles functions aligned within JV 2020 challenges. The pillars are: Joint Deployment and Theater Distribution;

(with a subgroup Joint Theater Logistics Management Subgroup); Information Fusion; Joint Health Service Support; Multinational Logistics and Interagency; Agile Infrastructure; Ordnance; and Engineering and Construction.[38]

ARMY LOGISTICS INITIATIVES

Velocity Management

Velocity management (VM) is a cross-functional, cross-organizational initiative to analyze and redesign logistics to improve the speed and accuracy of materiel and information flow. The objective is to substitute velocity of materiel movement for investment in inventory. VM has achieved a 51 percent reduction in order and shipment times inside the continental United States and a 53 percent reduction in overseas shipments. Analysis is underway to reduce processing times for repairs, financial management, and determination of inventory requirements, procurement, transportation, and financial management. [39]

Single Stock Fund (SSF)

SSF is part of Army's response to Defense Management Review Decisions 927J (Consolidating Retail and Wholesale Systems) and 901 (Reducing Supply Systems Costs). It is a HQDA business process reengineering initiative to improve logistics and financial processes in the Army Working Capital Fund, Supply Management Army (AWCF-SMA) business area. It is merging wholesale and retail elements of the AWCF-SMA below Departmental level into a single, nationally managed fund. This will streamline current operations that have caused numerous inefficiencies, including multiple points of sale and credit, multiple ledgers and billing accounts, and duplicative automated systems managing the same inventory. At end state, SSF will consolidate management of current wholesale, theater, corps/installation, and division authorized stockage list inventories into a seamless logistics and financial system, and create a single, virtual supply and maintenance operation.

Wholesale Logistics Modernization Program

The Wholesale Logistics Modernization Program (WLMP) is an enterprise resource planning approach to modernize the Army's wholesale or national logistics processes. The Army is purchasing WLMP as a service, not as a system, to replace the systems used to manage supply and maintenance functions for the past 30 years. [39]

NAVY LOGISTICS INITIATIVES

High Yield Logistics

The Navy's High Yield Logistics strategy seeks to deliver the highest quality of service to forward-deployed forces throughout the world, while reducing total ownership costs. The goals for this strategy are (1) optimization of available funds through best value; (2) customer support and communication; (3) process innovation, and, (4) workforce productivity. The primary objective is to provide extraordinary support to the warfighter. The second objective is to strategically source supply inventory, infrastructure, maintenance, and service functions (where it makes sense). The third objective is to optimize the resources the Navy keeps to increase effectiveness and reduce redundancy within the remaining infrastructure. These overarching objectives encompass the six objectives of the logistics transformation in DRID #54.[40]

One-Touch Support

This Web initiative enables a customer to use the Internet to access the supply system to identify the location of stock, input requisitions, perform technical screening, and check on the status of a requisition. By using one password, the customer has access to myriad Navy and Defense Logistics Agency databases.[40]

Navy-Marine Corps Intranet

This initiative establishes one central Navy-Marine Corps information system, consolidating 200 separate Navy and Marine Corps computer systems, involving 350,000 desktop machines. The Navy and Marine Corps will implement this new integrated computer system worldwide, enabling sailors and marines ashore and at sea to exchange information instantaneously and securely. Ships at sea will connect using military and civilian communications satellite networks. The intranet is expected to enhance communication and provide improved capability in the fleet, which would positively affect readiness, manning, and retention.[41]

MARINE CORPS LOGISTICS INITIATIVES

Integrated Logistics Capability

The Marine Corps Commandant's logistics evolution initiative, the Integrated Logistics Capability (ILC) Project, is the primary effort affecting combat service support. The ILC initiative is designed to facilitate the development, integration, and fielding associated with emerging logistics capabilities by: (1) creating an environment that enables or supports continuous improvement of business practices, (2) ensuring maximum available operational capabilities and processes, and (3) minimizing the forward-deployed logistics footprint.[42]

Marine Corps Materiel Command

Establishing the Marine Corps Materiel Command (MARCORMATCOM) provided a single agency to be the focal point for materiel life-cycle management. The new command acquires approved and prioritized materiel solutions to logistics requirements, fields them to the operating forces, and sustains them throughout their service life. This requires close contact with the operating forces to provide the necessary logistics support. The Marine Corps established this organization for logistics evolution to minimize turbulence and increase effectiveness. The provided logistics capability enables Marine Corps forces to accomplish assigned missions across the full spectrum of expeditionary operations and warfare.[42]

USMC-Academic-Industry Alliance

The Marine Corps and Pennsylvania State University have teamed to develop an intermediate logistics course curriculum to educate and train the Marine Corps' logistics work force in state-of-the-art commercial capabilities. Penn State University, a premier logistics university, provides a 2-week course, the Marine Corps Logistics Education Program (MCLEP), that concentrates on transportation and distribution, finance, management, and depot rebuild billets. This course introduces students to innovative commercial logistics concepts and processes that can be incorporated into Marine Corps logistics across the full spectrum of conflict.[43]

AIR FORCE LOGISTICS INITIATIVES

Agile Logistics

Agile Logistics integrates business practices across all logistics functions and improves operational capability. This program seeks to "maximize operational capability by using high velocity, time-definite processes to manage mission and logistics uncertainly in lieu of large inventory levels—resulting in shorter cycle times, reduced inventories and cost, and a smaller mobility footprint." Agile Logistics principles and programs are intended to improve the cycle time of parts support and drive flowday reductions in repair processes. Reducing pipeline cycle times will produce a system that is more responsive to user needs and reduces the inventory necessary to meet those needs. Specifically articulated in its Global Vision, Reach, and Power Vision 2020 statement, the Air Force has embarked on a strategy to make its combat support even more agile by streamlining deployment requirements and endeavoring to reduce the forward support footprint by 50 percent. Through further evolution of its Agile Logistics effort, the Air Force will rely increasingly on distributed (or reachback) operations to efficiently sustain forces, providing time-definite delivery of needed capabilities. Fast, flexible, responsive, reliable support will be the foundation of all Air Force operations with a

focus on improving the warfighter's support and combat capabilities in the 21st century.[44]

Logistics Transformation

The current logistics system, designed to provide massive, forward-deployed support for overwhelming conventional power, must begin to give way to a more integrated, mobile, and precise logistics support function for aerospace power wherever, whenever, and however it is needed. Characteristics of this "transformed" logistics system include the concepts of time-definite delivery, time-definite resupply; effective command and control; theater "reachback" to CONUS logistics centers; and the use of integrated, state-of-the-art information systems to source, acquire, and transport items directly to the warfighter. Translating these characteristics into a single, world-class logistics system capable of supporting the 21st century warfighter requires a deliberate, measured transformation approach consistent with logistics' best practices used in both the public and private sector.

This approach must be guided by three basic concepts: (1) Air Force logistics is fundamental to expeditionary aerospace operations; (2) Air Force logistics must provide world-class performance while recognizing real-world constraints; and (3) Air force logistics must instill customer confidence. To do this, the Air force has called a specific team to address USAF logistics transformation issues. The team, comprised of government and industry representatives, is a fully integrated seamless group called to capitalize on the strengths, knowledge, and experience with various supply chain management systems in public and private sectors. The USAF Logistics Transformation Team will develop plans and schedules to identify transformation opportunities for value-added change of Air Force logistics processes. These plans will outline the overall approach for identifying logistics process enhancements and describe the activities required to accomplish the transformation.

Product Support Strategy

The Air Force product support concept requires the single manager (SM) to create and maintain a life-cycle product support strategy for its system or product. This strategy will be documented in a product support management plan. The development of this strategy should be the result of a rigorous assessment process. This process should be led by the Program Office to ensure that the resulting strategy identifies existing or projected cost drivers, performance shortfalls, and potential product support concepts to halt or reduce cost increases. Product support strategies will show a clear preference for the following characteristics: (1) performance-based support arrangements and contracts based on high-level metrics; (2) preference for a single prime-support integrator (organic or contractor); (3) long-term business relationships; (4) preference for commercial standards; (5) partnering—leveraging the best skills and capabilities for support, wherever they exist; (6) service level agreements (SLAs)—clearly delineated agreements of support

between customers and suppliers; and (7) emphasis on encouraging continuous technology refreshment through adopting performance specifications, commercial standards, non-developmental and commercial-off-the-shelf items wherever feasible, in both the initial acquisition design phase and all subsequent modification and reprocurement actions.

- Contract Product Support—Total system performance responsibility; total system support responsibility; flexible acquisition and sustainment tool; and flexible sustainment.

- Organic Product Support—Aircraft repair enhancement, depot repair enhancement, and contract repair enhancement programs.[45]

UNITED STATES TRANSPORTATION COMMAND LOGISTICS INITIATIVES

Reinvention CINC

In June 1998, Secretary of Defense William Cohen designated USCINCTRANS as the "Reinvention CINC." This designation provides USCINCTRANS with expanded capability to emulate the best business practices of private industry. The Command's reinvention proposals, developed in concert with corporate partners, focus on three main areas: (1) financial controls—real time visibility of financial status and flexibility to direct dollars to take advantage of emergent opportunities and maximize return to stakeholders; (2) organizational controls—shaping the workforce and structure in response to market conditions; and (3) process controls—instituting business rules, information processes, and contracting decisions for optimal effectiveness and efficiency.[46]

Defense Transportation System Enterprise Architecture

The Defense Transportation System (DTS) is the most capable strategic mobility system in the world. DTS is a cornerstone of the United States National Security Strategy of responding to two nearly simultaneous major theater wars. Nonetheless, USTRANSCOM is not satisfied with the status quo; it continually seeks new and better ways to provide enhanced global mobility for the nation. The Defense Transportation System Enterprise Architecture (DTS EA) is an essential initiative to build the transformed military transportation system of the future. DTS EA describes current capabilities and provides an overarching framework to numerous initiatives focused on the future. When fully executed, the DTS EA will lay the groundwork for a reliable, rapid, secure, responsive, and survivable infrastructure that collects, collates, and presents voice, data, and video information in standard formats using standard applications wherever and whenever needed by warfighters and supporting elements.[47]

Strategic Distribution Management Initiative

The Strategic Distribution Management Initiative (SDMI) is a joint effort headed by the Commander of USTRANSCOM and the Director of DLA, in consultation and coordination with the Military Services and other defense agencies, to improve DoD's end-to-end distribution system. The SDMI provides a senior-level forum for coordinating joint distribution/transportation process improvement activities. The scope of this initiative is bounded at respective ends of materiel stockage through warehousing and transportation, beyond the ports of debarkation (in theaters), to retail distribution stockage points (i.e., the supply stockage activity/base supply) either in CONUS or overseas.

The SDMI initiative is examining current stockage policies, storage, transportation and distribution practices, along with associated information and distribution technologies to create improved processes to satisfy current and future peace and wartime requirements. This initiative has three basic obejctives: (1) to facilitate an integrated supply chain process, (2) to define, measure and improve strategic distribution requirements and capabilities, and (3) to recommend and coordinate policy changes to effect improved logistics capabilities. [21]

DEFENSE LOGISTICS AGENCY LOGISTICS INITIATIVES

DLA 21

DLA 21 is the Defense Logistics Agency's integrated plan to prepare itself to provide essential military logistics support for the 21st century warfighter. DLA 21 focuses on five main areas: organizational redesign, modernization of automated business systems, employment of strategic partnerships with industry, better knowledge and understanding of customer needs, and replenishment and development of a world-class workforce. In April 2000, the Agency restructured its headquarters into four directorates to enable it to more effectively pursue the ongoing other thrusts of DLA 21. Logistics Operations focuses on supply chain management, readiness, and contingency operations support. Information Operations consolidates the Agency's information technology activities to enhance electronic commerce, logistics support systems, and documentation automation in support of military logistics. Financial Operations is streamlining the DLA financial system so it serves as an enabler of the Agency's initiatives of the future. Human Resources focuses on providing and maintaining a world-class workforce to accomplish logistics transformation. [48, 49]

Strategic Sourcing

Strategic Sourcing is an overarching approach to ensuring that the best-value sourcing strategy is applied to every DLA-managed item. This is an umbrella effort that encompasses DLA's pursuit of supply chain solutions via shifts to commercial practices. It includes the use of prime vendor/virtual prime vendor

(PV/VPV) relationships, long-term corporate (LTC) contracts that use direct vendor delivery (DVD), and strategic supplier alliances (SSAs). The result is the use of the most appropriate contractual vehicles for providing customer-focused, best-value logistics support.[48, 49]

Business Systems Modernization

The DLA Business Systems Modernization (BSM) program is a key initiative for the Agency in achieving its vision to reengineer its logistics processes to reflect best commercial practices. BSM will include implementation of commercial SAP enterprise resource planning (ERP) software and Manugistics Advance Planning and Scheduling (APS) systems to replace mission critical materiel management legacy systems. BSM is a significant milestone for DLA in its plan to achieve the logistics transformation envisioned by Joint Vision 2020, the joint warfighting vision for the military services. The BSM effort will provide the necessary leading edge technology to allow DLA to focus on its core business, supply chain management. The entire implementation is expected to take 5 years, with the initial efforts replacing two major legacy systems, Standard Automated Materiel Management System (SAMMS) and Defense Integrated Subsistence Management System (DISMS), and their associated systems.[48, 50]

Appendix C
Logistics Initiatives by Organization and Submitted Document

Tables C-1 through C-6 comprise the master list of logistics initiatives from the Best Commercial Practices 1999 Report to Congress, POM Tabs N-4s and Gs, and the DRID 54 responses. There is one table for each of the Services, USTRANSCOM, and the DLA. Each table contains a complete list of initiatives, listed alphabetically, with sources indicated by an "X" in the appropriate columns. These tables reflect the starting point for analysis of DoD's logistics technology plans.

Table C-1. Army Logistics Initiatives

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Abrams M-1 tank[a]		X		
Advanced field artillery tactical data system[a]		X		
Air load module			X	
Analysis and studies of future logistics requirements				X
Apache AH-64[a]	X	X		
Army in-transit visibility		X		X
Army logistics over the shore (LOTS) and watercraft				X
Army prepositioned stocks/ashore/afloat				X
Army strategic mobility plan				X
Automatic identification technology			X	X
Built-in prognostics and diagnostics				X
Chinook CH-47[a]		X		
Class I configured loads				X
Comanche RAH-66[a]		X		
Commodity command standard system			X	
Consolidated contractor life cycle support—training aids and simulators	X	X		
Crusader[a]		X		
Deployment automation				X
Deployment outloading				X
Deployment stock package				X
Depot repair process improvements	X	X		
Distribution-based logistics system				X
Department of the Army (DoA) movement management system			X	
Electronic sustainment support centers	X	X		

Table C-1. Army Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Electronic technical manuals and equipment downtime analyzer		X		X
Electronic technical manuals and interactive electronic technical manuals				X
Family of medium tactical vehicles	X			
Focused sustainment	X			
Force XXI battle command brigade and below	X			
Global combat support system	X	X		X
Heavy expanded mobility tactical trucks[a]		X		
High mobility artillery rocket system[a]		X		
Implement customer wait time (CWT)		X		X
Implement dollar-cost branding		X		X
Implement forward stock positioning				X
Implement national maintenance program	X	X		X
Implement TAV	X	X		X
Implement Web-based logistics				X
Integrated logistics analyzer program		X		X
Integrated sustainment maintenance (ISM)	X			
Interactive electronic technical manuals				X
Joint computer-aided acquisition and logistics support (JCALS)			X	X
JP8 vs. Jet A-1 study				X
Lateral redistribution	X	X		X
Lead-time reduction	X	X		
Logistics integrated database	X	X		
Logistics supply systems			X	
M109 family of vehicles fleet management (recommended for termination)	X	X		
Material management system implementation			X	
Mission-configured loads				X
Modernization through spares	X	X		
Modernize army tool kits		X		X
Movement tracking system	X			
Recapitalization of aging equipment to ensure operational effectiveness				X
Reduce repair cycle time				X
Reduce support requirements through science and technology				X
Secure tactical local area network (LAN)				X
Simplified priority system		X		X
Single stock fund	X	X		X
Supply management, Army-operations and support cost reduction (SMA-OSCR)		X		
Standard Army ammunition system			X	
Standard Army depot system			X	

Table C-1. Army Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Standard Army maintenance system			X	
Standard Army retail supply system			X	
Standard retail supply system interface—paperless contracting	X	X		
Strategic configured loads and strategic logistics program			X	
Total distribution program			X	
Total ownership costs				X
Total ownership cost reduction				X
Transportation coordination automated information system			X	
Unit-level logistics system			X	
Velocity management	X	X		X
Virtual integrated materiel management center	X	X		
Warfighter information network	X			
Wholesale logistics modernization program	X	X	X	

[a] Denotes a product support pilot program.

Table C-2. Navy Logistics Initiatives

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Affordability through commonality program effort—Naval Sea Systems Command (NAVSEA)				X
Automatic identification technology (AIT)			X	X
Aviation maintenance and supply readiness—Naval Air Systems Command (NAVAIR)				X
Baseline advanced industrial management			X	
Collaboration-at-sea initiative				X
Competency management program (NAVSEA)				X
Contractor logistics support	X	X		
Cost reduction through standardization—Military Sealift Command (MSC)				X
Customer wait time	X	X		X
Depot maintenance system			X	
Design for ownership (NAVSEA)				X
Direct vendor delivery	X			
Distribution standard system			X	
Distance support/anchor desk/integrated call center (NAVSEA)				X
Electronic servmart shopping	X	X		
Enable condition-based maintenance—Office of Naval Research (ONR)				X
Enhanced sparing model	X	X		
Enterprise resource planning (ERP)	X	X	X	X
Establish a system that provides each military sealift command ship total asset visibility (MSC)				X

Table C-2. Navy Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Finance and air clearance transportation system			X	
Fleet support team (FST) (NAVAIR)				X
H-60 helicopter[a]		X		
Independent logistics assessment certification (NAVSEA)				X
Integrated product support (NAVSEA)				X
Inventory control points—uniform automated data processing			X	
Joint aviation technical data integration (NAVAIR)				X
Joint computer-aided acquisition and logistics system			X	
Joint engineer data management information control system			X	
Logistics e-business concept of operations (NAVSEA)				X
Logistics engineering change proposal program—Naval Supply Systems Command (NAVSUP)	X	X		X
Long-term contracting	X	X		
Maintenance cycle time reengineering	X	X		
Manufacturing resource planning II	X	X		
Material management system implementation			X	
Material requirements review—response times and efficiency of fleet issue load lists	X	X		
Metrology automated system uniform recalibration/reporting			X	
Modernization of maintenance information support systems	X	X		
Manufacturing resources planning (MRP)			X	
NAVAIR depot workload control system			X	
NAVAIR logistics data analysis			X	
NAVAIR plan for total asset visibility for sponsor-owned material		X		X
Naval industrial material management system			X	
Naval ordnance joint total asset visibility (CNO N4)				X
Naval ordnance readiness improvement process				X
NAVSEA data environment				X
NAVSEA depot maintenance system			X	
Navy and Marine Corps intranet				X
Navy electronic commerce online	X	X		
Navy tactical communication support system			X	
One-touch support initiative (NAVSUP)	X	X		X
Organic industrial enterprise logistics support—Naval Inventory Control Point (NAVICP) broad agency announcement (BAA)	X	X		
Plan to fully implement total asset visibility (NAVSUP)		X		X
Plan to implement CWT (NAVSUP)		X		X
Professional development program (NAVAIR)				X
Quality management system (NAVAIR)				X
Rapid retargeting	X	X		

Table C-2. Navy Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Readiness support systems	X	X		
Reduce CWT for military sealift command ship material				X
Reduce overall costs to customer (MSC)				X
Re-engineer applicable naval ordnance logistic processes/systems (CNO N4)				X
Regional maintenance automated information system			X	
Regional third-party logistics providers	X	X		
Response to failure (NAVAIR)				X
Retention level review	X	X		
Serial number tracking (NAVAIR)	X	X		X
Ship configuration and logistics support information system			X	
Stock points—uniform automated data processing			X	
Support equipment resource management information system			X	
Sustained maintenance planning (NAVAIR)				X
Technical publications life-cycle processes (NAVAIR)				X
Third-party logistics providers—retrograde management	X	X		
Total ownership cost reduction (NAVSEA)				X
Toolbox (NAVAIR)				X
Top management attention/top management issues (FLEETS)				X
Total asset visibility—Navy	X			X
Total asset visibility (NAVSEA)			X	X
Total ownership cost (NAVAIR)				X
Transportation coordination automated information system			X	
Trident logistics data system			X	
Update and revise military sealift command logistics systems and procedures (MSC)				X
Warfighter—increase readiness, effectiveness, and satisfaction through use of performance metrics (NAVAIR)				X

[a] Denotes a product support pilot program.

Table C-3. Marine Corps Logistics Initiatives

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Asset tracking logistics and support system			X	
Atlass II		X		
Contractor logistics support	X			X
Creation of product management teams				X
Develop mean time between failures (MTBF) as effective readiness indicator				X
Establishment and maturation of Marine Corps Material Command (MARCORMATCOM)				X

Table C-3. Marine Corps Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Future MARCORMATCOM organizational adjustments and considerations				X
Given total ownership cost (TOC) methodology, identify steps to reduce TOC				X
Identify TOC methodology and obtain necessary data to compute TOC				X
Integrated logistics capability (ILC)		X		
Implement customer wait time				X
Implement total asset visibility	X			X
Improve management of secondary reparables				X
Infrastructure improvement to improve strategic mobility				X
Joint Services/agency interaction and coordination				X
Major task force war planning module II			X	
MARCORMATCOM strategic business plan				X
Marine Corps logistics campaign plan				X
Minimize logistics costs while meeting warfighter requirements				X
Mobility requirements study (MRS-05)				X
Prime vendor—USMC	X			
Protection of movement information in defense transportation system automated information systems				X
Purchase Blount Island				X
Reengineer/modernize applicable logistics processes/systems				X
Simplification of processes required to get equipment to the warfighter				X
Small-unit logistics		X		
Strategic airlift in the western Pacific (WESTPAC)				X

Table C-4. Air Force Logistics Initiatives

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Acquisition lead time reduction through long-term contracts with vendors		X		
Afloat prepositioned fleet increase of number of ships to four				X
Air Force performance measure reporting system				X
Aircraft repair enhancement program	X			
Aircraft spares availability				X
Asset management improvements through integrated information systems and web-enabled consumables management				X
Cargo movement operational system			X	
Combat ammunition system			X	
Comprehensive engine management system			X	

Table C-4. Air Force Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Contract depot maintenance activity group (DMAG) management		X		
Contract repair enhancement program	X			
Core automated maintenance system			X	
Corporate contracts—increase use to minimize cost	X			
Cost savings modernization initiative		X		X
Data integration and warehousing				X
Depot maintenance consolidation	X			
Depot repair enhancement program	X			
Execution and prioritization of repair support system	X			
Exploitation of AIT				X
Express transportation	X			
Fuels automated system			X	
Global command and control system (GCCS)				X
Implement CWT				X
Implement total asset visibility				X
Industrial engineer technical programs		X		
Infrastructure improvements at Air Force Materiel Command (AFMC) installations		X		
Integrated information systems				X
Integrated logistics system—supply	X		X	
Integrated maintenance data systems	X		X	
Joint ammunition management standard system			X	
Joint logistics systems center		X		
Logistics transformation scorecard				X
Logistics transformation and functional integration	X			
Maintenance planning and execution system			X	
Material/parts ordering process automation		X		
Merge flightline and depot systems				X
Merger of D041 and D062 systems	X			
Merlin 2000				X
Network optimization				X
Online vehicle interactive management system			X	
Pipeline tracking analysis and metrics system	X		X	
Product support partnerships				X
Propulsion acquisition lead time		X		
Public/private competition		X		
Reengineered logistics support concepts				X
Reengineering supply support process	X			
Reengineering templates		X		

Table C-4. Air Force Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Regional supply squadron	X			
Reliability and maintenance information system			X	
Requirements data bank			X	
Requirements management system	X			
Standard base supply system			X	
Stock control system			X	
Supply and transportation unit reengineering	X			
Supply chain management				X
Support expeditionary aerospace force		X		
System executive management report				X
Transportation coordination automated information system II			X	
Virtual prime vendor	X			
Weapon systems—establish technically compliant operations across all product lines		X		
Weapons systems management information system			X	
Web enablement				X
Web-enabled consumables management				X
Workforce—develop qualified AFMC depot staff		X		
Workload consolidation		X		

Table C-5. DLA Logistics Initiatives

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Catalog reengineering system			X	
Defense Depot San Joaquin (DDJC) distribution center 2000		X		
Defense Distribution Depot Susquehanna (DDSP) distribution center 2001		X		
DDSP electronic document management control		X		
Defense fuel automated system			X	
Defense integrated subsistence management system			X	
Defense medical logistics standard support program			X	
Defense message system			X	
Defense property accountability system			X	
Defense reutilization and marketing service			X	
Distribution standard system			X	
DLA business system modernization			X	
Federal logistics information system			X	
Forward stocking policy		X		
Fuels automated system			X	
Implement customer wait time				X

Table C-5. DLA Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Improve strategic mobility				X
Information assurance			X	
Integrated data environment			X	
Joint electronic commerce program office			X	
Joint total asset visibility system			X	
Knowledge management			X	
Logistics community management			X	
Minimize logistics costs while meeting warfighter requirements				X
Optimize support to the warfighter				X
Reengineer/modernize applicable logistics processes/systems				X
Subsistence total order and receipt electronic system			X	

Table C-6. USTRANSCOM Logistics Initiatives

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Accommodating surge shipping requirements				X
Advanced shipping notices			X	
Automated identification technology/total asset visibility				X
Automated information technologies			X	
Automated system for transportation data			X	
Avoidance of material cost		X		
C-17 combustion engine exit temperature kit		X		
C-5 anti-skid upgrade		X		
C-5 fuel flow indicator/transmitter		X		
C-5 high-pressure turbine upgrade		X		
CONUS freight management system			X	
Core automated maintenance system			X	
Crowley containership contract		X		
Defense transportation system (DTS C2)				X
DTS EA				X
DTS migration				X
DTS scheduling				X
Global air traffic management (GATM)				X
Greater use of modeling and simulation				X
Heavy lift propositioning ships (HLPS) II contract		X		

Table C-6. USTRANSCOM Logistics Initiatives (Continued)

Initiative	Report to Congress	POM Tab N	POM Tab G	DRID 54
Improve transportation infrastructure				X
Improving transportation cost estimates				X
Increase airlift capacity				X
Increase airlift reliability				X
Increase customer service				X
Integrated command, control, and communication system			X	
Interim teleport				X
In-transit visibility			X	
Joint logistics over the shore (JLOTS)				X
Joint operation planning and execution system (JOPES)				X
Large aircraft infrared countermeasures (LAIRCM)				X
Material handling equipment (MHE)				X
Recap sealift				X
Selection of intermodal shipping providers				X
Strategic distribution management initiative (SDMI)				X
TDD				X
Transportation business decision support system			X	
Transportation financial management system (TFMS)				X
Transportation operational person property system			X	
US flag sealift				X
Worldwide port system			X	

Appendix D
Abbreviations

ACS	Agile Combat Support
AFMC	Air Force Materiel Command
AIS	Automated Information System
AIT	Automatic Identification Technology
ALCs	Air Logistics Centers
AMC	Air Mobility Command
AMC	Army Materiel Command
APS	Advance Planning and Scheduling
ASLP	Army Strategic Logistics Plan
AT&L	Acquisition, Technology, and Logistics
AWCF-SMA	Army Working Capital Fund, Supply Management Army
BRAC	Base Realignment and Closure
BSM	Business Systems Modernization
CINCs	Commanders In Chief
CIO	Chief Information Officer
CNO	Chief of Naval Operations
COP-CSE	Common Operational Picture-Combat Support Enabled
COTS	Commercial-Off-The-Shelf
CWT	Customer Wait Time
DCINC	Deputy Commander in Chief
DCS (I&L)	Deputy Chief of Staff for Installations and Logistics
DCSLOG	Deputy Chief of Staff for Logistics
DII/COE	Defense Information Infrastructure/Common Operating Environment
DISA	Defense Information Systems Agency
DISMS	Defense Integrated Subsistence Management System
DLA	Defense Logistics Agency
DoD	Department of Defense

DRI	Defense Reform Initiative
DCSLOG	Deputy Chief of Staff Logistics
DTS EA	Defense Transportation System Enterprise Architecture
DUSD (L&MR)	Deputy Under Secretary of Defense (Logistics and Materiel Readiness)
DVD	Direct Vendor Delivery
ERP	Enterprise Resource Planning
FLOW	Focused Logistics Wargame
FSMP	Full Service Moving Project
GAO	Government Accounting Office
GCSS	Global Combat Support System
HTML	HyperText Markup Language
ICP	Inventory Control Point
ILC	Integrated Logistics Capability
IT	Information Technology
JCALS	Joint Computer-Aided Acquisition and Logistics Support
JLWI	Joint Logistics Warfighting Initiative
JV	Joint Vision
LA	Logistics Architecture
LAN	Local Area Network
LIB	Logistics Information Board
LRSSG	Logistics Reform Senior Steering Group
LTC	Long-Term Corporate
MARCORMATCOM	Marine Corps Materiel Command
MC	Mission Capable
MCLEP	Marine Corps Logistics Education Program
MPPR	Maintenance, Policy, Programs, and Resources
MRP	Manufacturing Resource Planning
MRS-05	Mobility Requirements Study
MSC	Military Sealift Command
MTMC	Military Traffic Management Command
MTW	Major Theater War
NAVAIR	Naval Air Systems Command

NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
OSD	Office of the Secretary of Defense
OUSD	Office of the Under Secretary of Defense
PA&E	Programs, Analysis, and Evaluation
PKI	Public Key Infrastructure
POM	Program Objective Memorandum
PPBS	Planning, Programming, and Budgeting System
PV/VPV	Prime Vendor/Virtual Prime Vendor
RTOC	Reduction in Total Ownership Cost
S&T	Science and Technology
SAM	Sailor Arranged Move
SAMMS	Standard Automated Materiel Management System
SCI	Supply Chain Integration
SCOR	Supply Chain Operations Reference (model)
SDMI	Strategic Distribution Management Initiative
SLA	Service Level Agreement
SSA	Strategic Supplier Alliance
SSF	Single Stock Fund
TAV	Total Asset Visibility
TDD	Time Definite Delivery
TOC	Total Ownership Cost
TP	Transportation Policy
USD (C)	Under Secretary of Defense (Comptroller)
USD (P&R)	Under Secretary of Defense (Personnel & Resources)
USTRANSCOM	United States Transportation Command
VM	Velocity Management
VPN	Virtual Private Network
WLMP	Wholesale Logistics Modernization Program
XML	eXtensible Markup Language